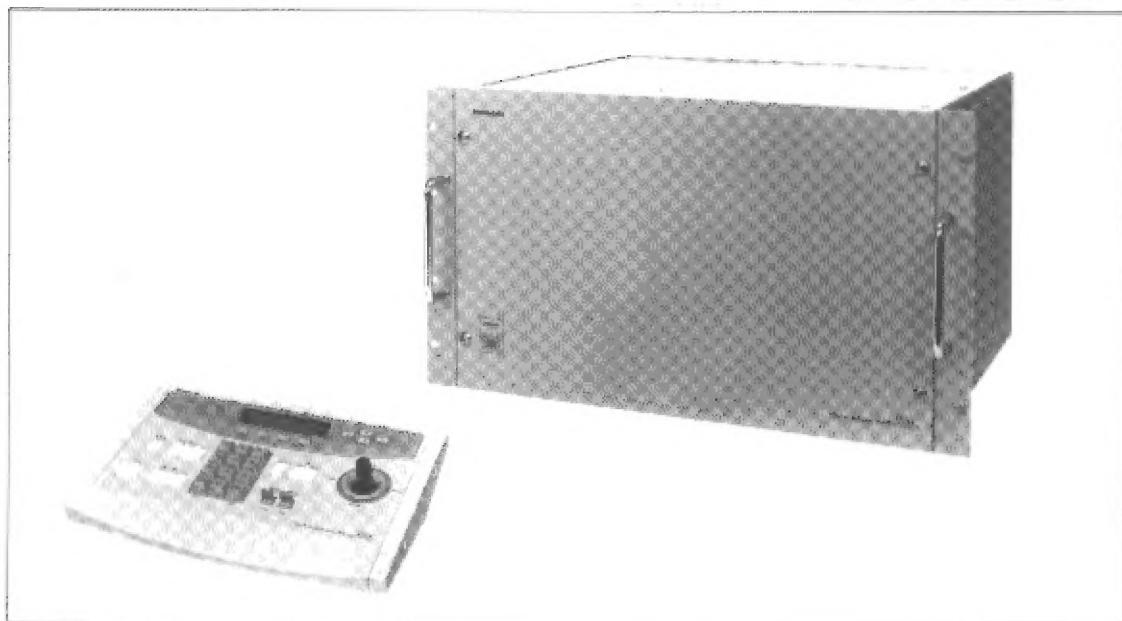


Operating Instructions

Matrix Switcher
WJ-SX550A
System Controller
WV-CU550A



Panasonic®

Before attempting to connect or operate this product, please read these instructions completely.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For U.S.A.

Warning:

This equipment generates and uses radio frequency energy and if not installed and used properly, i.e., in strict accordance with the instruction manual, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

The serial number of this product may be found on the rear of the unit.

You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. _____

Serial No. _____

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

PREFACE

The WJ-SX550A Matrix Switcher, when combined with the optional WV-CU550A System Controller and WJ-AD550 Extension Unit, allows for flexible control of 128 cameras and 16 monitors.

Through the use of user-friendly, on-screen menu setups, programmable sequences and tours can be easily established for customized security requirements.

The use of modular construction for the WJ-SX550A Matrix Switcher allows for flexible expansion for future needs.

FEATURES

The WJ-SX550A Matrix Switcher, when combined with the WV-CU550A System Controller and WJ-AD550 Extension Unit enables control of the following functions:

- Routing of up to 128 cameras to any one of 16 monitors.
- Remote control of up to 128 cameras and auxiliary equipment, by using optional receivers and accessories, including:
 1. Remote control of Pan-Tilt Head and Camera Housing.
 2. Remote control of Motorized Zoom Lenses:Focus, Zoom and Iris.
 3. Remote control of camera setting, including Electronic Sensitivity Up, Electronic Shutter, Electronic Zoom, and more.

Additional features of the WJ-SX550A include:

Versatile Camera Switching Modes

- Independent programmable sequence for each monitor (16 programs)
- 32 tours including Dwell Time, Camera Preset Position and AUX Controls for any monitor
- 8 group synchronized sequences including Dwell Time, Camera Preset Positions and AUX Controls
- Any tours or group synchronized sequence can be called up by operators manually, by alarm and time date schedule automatically

Flexible Alarm Activations

- Alarm Mode 1: Single monitor is assigned for auto alarm call up with single VCR control.
- Alarm Mode 2: 4 monitors are assigned for auto alarm call up with 4 VCR controls.
- Alarm Mode 3: Any camera, with its preset position, can be assigned to any monitor.

Alternatively, any tour or group sequence can be assigned to any monitor or group of monitors.

Programmable System Partitioning and Priority

- Operator Registration: 5 operator access levels to system for setup and operation.
- Password protection to limit operators access to system
- Operator priority to lock out lower priority operators.

PRECAUTIONS

- All necessary procedures, with regards to the installation of this unit should be made by qualified service personnel or system installers.
- Do not attempt to disassemble the unit.
In order to prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside.
Do refer all servicing to qualified service personnel.
- Handle the unit with care.
Do not abuse the unit. Avoid striking, shaking, etc. It could be damaged by improper handling or storage.
- Do not expose the unit to rain or moisture, or try to operate it in wet areas.
Do take immediate action if the unit becomes wet. Turn the power off and refer servicing to qualified service personal. Moisture can damage the unit and also create the danger of electric shock.
- Do not use strong or abrasive detergents when cleaning the unit body.
Do use a dry cloth to clean the unit when dirty. In case the dirt is hard to remove, use a mild detergent and wipe gently.
- Do not operate the unit beyond its temperature, humidity or power source ratings.
Do not use the unit in an extreme environment where high temperature or high humidity exist.
Use the unit under conditions where temperatures are within -10°C - +50°C (14°F - 122°F), and humidity is below 90%.

The input power source is 120V AC 60 Hz.

HOW TO USE THIS MANUAL

The purpose of this manual is to provide step-by-step instructions for setting up and operating a Matrix System 500. If Matrix Switchers are new to you, it is highly recommended that you read this manual in its entirety. If you are already familiar with Matrix Switchers you might want to skip over Section 1, Basic Operation of a Matrix Switcher, and go directly to Section 4, Installation and System Connections. Each section of this manual is briefly described below.

Section 1. Basic Operation of a Matrix Switcher
This section covers the basics of crosspoint switching, spot and sequencing, microprocessor control of switching and camera accessory control.

Section 2. Features of the System 500 Matrix Switcher
The main features of the System 500 are described. Numerous illustrations are included that help to simplify the explanations. A thorough understanding of key features is very important for proper setup of the system.

Section 3. Detailed Product Description and Selection
Operating controls and their functions are explained in this section. Also, in-depth information about each board is given here, along with details about proper board setup. A table is included here that specifies how many optional boards are required for every possible system expansion.

Section 4. Installation and System Connections
Information about cable connections between the Matrix Switcher and System Controllers, cameras, monitors and peripheral devices is provided here.

Section 5. Software Setup
Step-by-step procedures for successful first time programming of the system are explained in this section. Graphical representations of the various setup tables are also provided. This section is very important as proper programming of the system is vital for customizing the system to the end user's requirements.

Section 6. Operating Procedures
After system programming, normal operation of the system on a daily basis is done by following the steps outlined in this section.

Section 7. Troubleshooting
Most of the problems in a Matrix System can be traced to faulty hardware or software setup. This section is invaluable as an aid in identifying the sources of common problems. Reading this section before requesting service will save you time in resolving those problems.

Section 8. Specifications

Section 9. Index

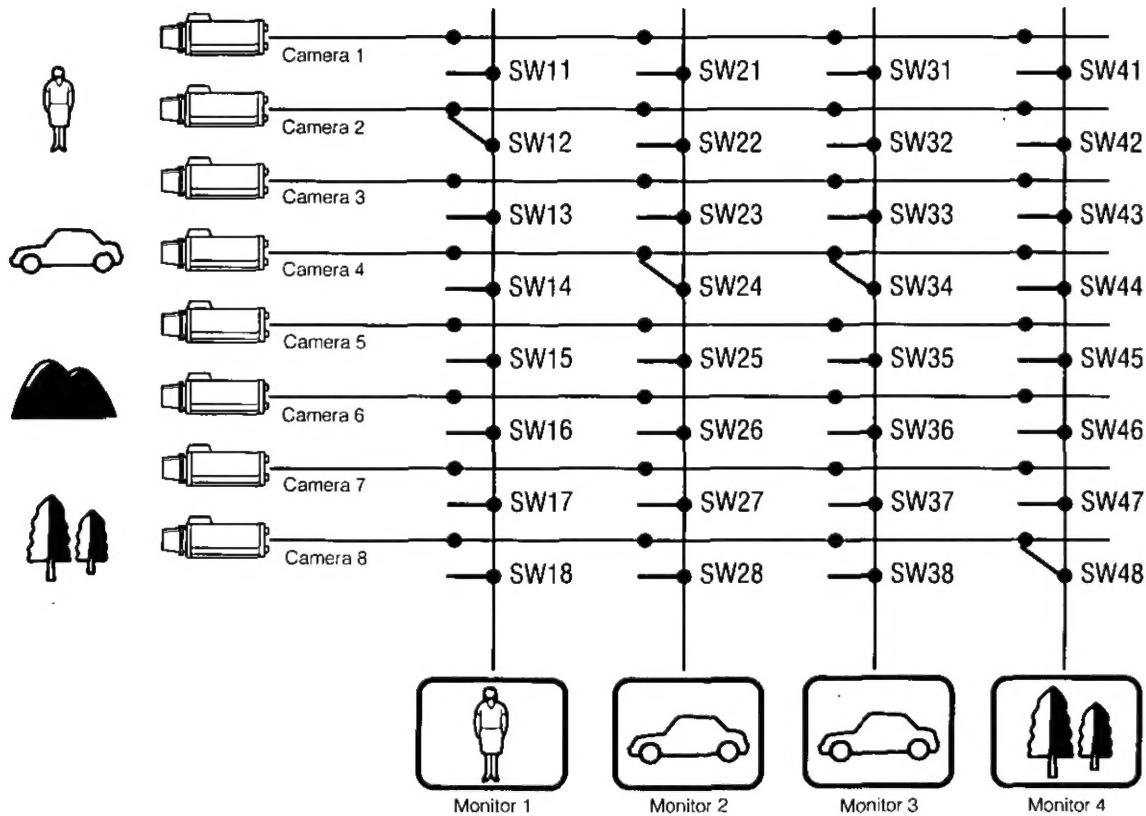
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**BASIC
OPERATION
OF
A MATRIX
SWITCHER**

BASIC OPERATION OF A MATRIX SWITCHER

■ Crosspoint Switches



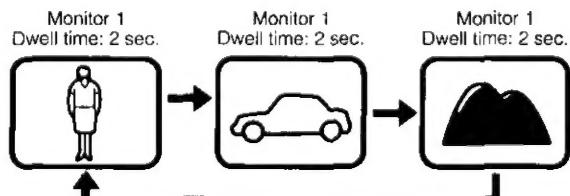
All Matrix Switchers, no matter how complicated and sophisticated they may be, depend on crosspoint switches to perform the basic operations of the switcher. The crosspoint switches form a rectangular array of rows and columns in which any row may be connected to any column.

In the Matrix Switcher shown above, the rows are connected to video cameras and the columns are connected to video monitors. By closing a certain crosspoint switch we may connect any camera to any monitor.

In the example above, by closing switch SW12, camera 2 is displayed on monitor 1. Likewise, by closing SW24, camera 4 is displayed on monitor 2. In this example, camera 4 and monitor 3 are also connected, as well as camera 8 and monitor 4.

■ Spot and Sequence

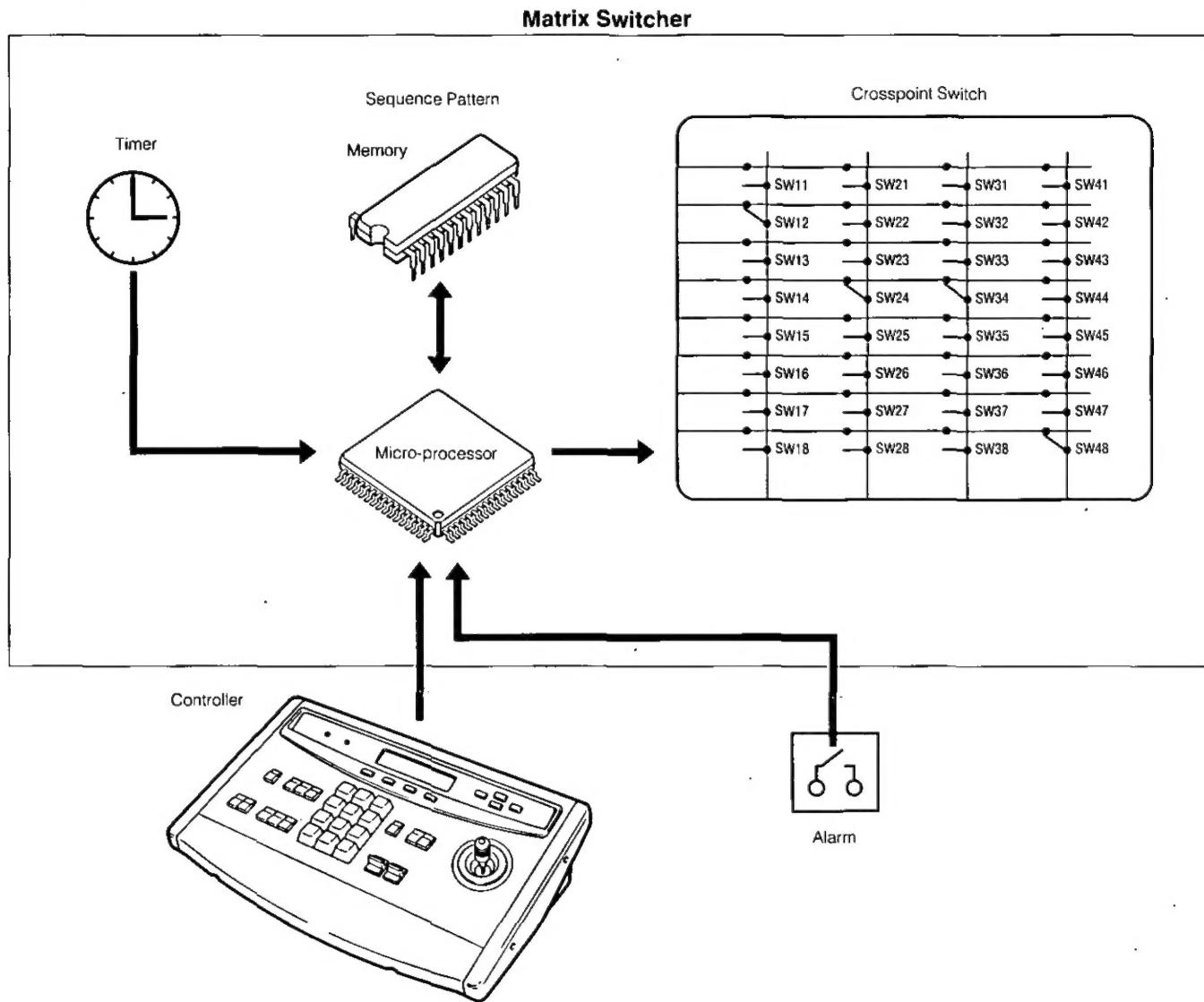
Two basic operations of the Matrix Switcher are the **SPOT** and **SEQUENCE** functions. In the **SPOT** mode a specific camera is continuously connected to a specific monitor with no interruption. In the **SEQUENCE** mode a series of cameras are displayed in succession on a monitor. If SW12, SW14 and SW16, of the crosspoint switch array shown in the previous example, are each closed in a sequential manner for two seconds, monitor 1 will display camera images as shown on the right.



The duration of an camera image in a sequence is called **DWELL TIME**.

A sequence pattern which repeats itself continuously, such as the one shown above, can be stored in the memory section of the Matrix Switcher.

■ Activation of crosspoint switches



In Matrix Switchers the activation (or closure) of a crosspoint switch is performed by a microprocessor. This microprocessor may get its commands from one of three sources.

- 1) From a controller manually operated
- 2) From an external alarm signal
- 3) From an internal timer (clock)

Upon receiving a command signal the microprocessor retrieves the sequence pattern, previously stored in memory, and activates the crosspoint switches in the proper order.

For example:

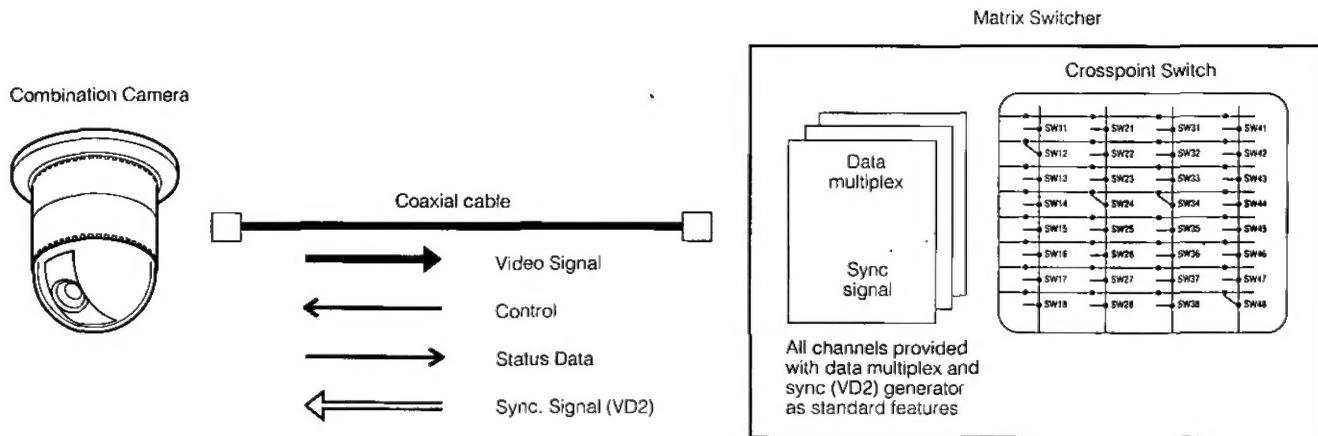
• Alarm 3 input	⇒	Camera 3 picture output to Monitor 1
• January 7, 10:00AM	⇒	sequence of Camera 1 → Camera 2 → Camera 3

output to Monitor 2

■ Camera, Pan/Tilt Head Control and Camera Synchronization

In addition to controlling the crosspoint switches, the Matrix Switcher can also control external devices such as Pan/Tilt Head Units, Zoom Lenses and auxiliary circuits through the use of Control Data multiplexed with the video signals.

Also, in cases of Panasonic Matrix Switchers, a unique signal called VD2 is multiplexed with the video signals and is used to synchronize Panasonic cameras to prevent picture rolling during switching between cameras.

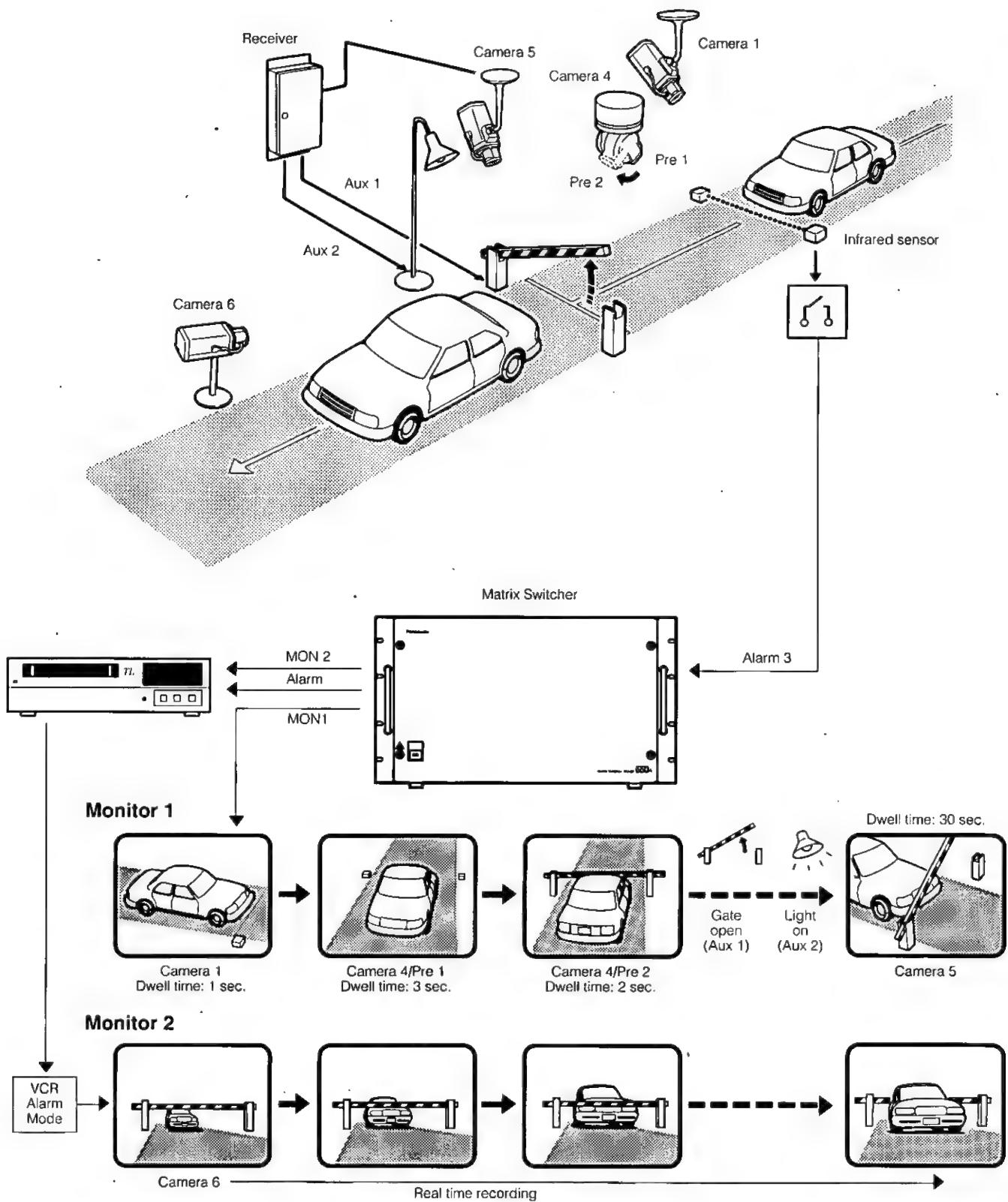


Signal	Function
Control Data	Controls pan, tilt, zoom, focus, iris control shutter speed, back light setting, preset position, auxiliary control, wiper and defroster.
Status Data	Sends camera setting information
Synchronizing Signal (VD2)	Unique VD2 signal is sent to Panasonic cameras to synchronize the cameras with the Matrix Switcher, thereby preventing rolling during camera picture switching.

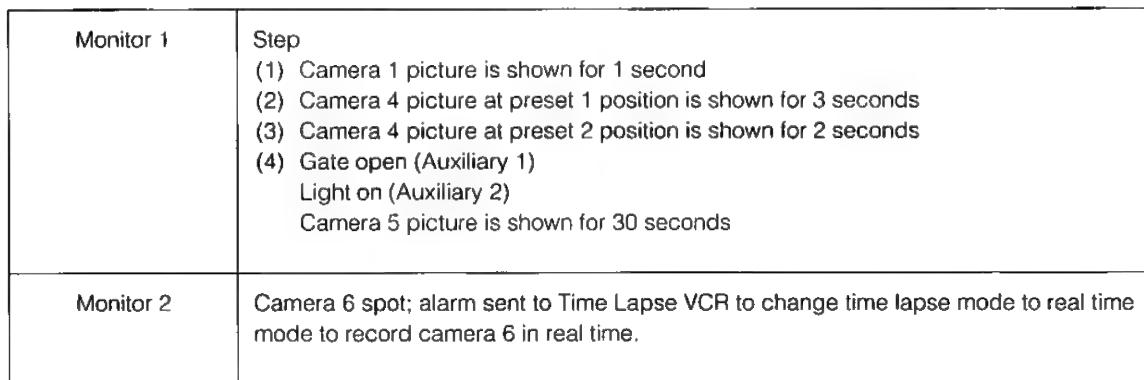
Diagram comparing camera synchronization with VD2 off and VD2 on. In VD2 OFF mode, the camera image shows a person, a car with a tilted image, and a car with a tilted image. In VD2 ON mode, the camera image shows a person and a car with a correctly aligned image.

• Examples of Advanced Applications

As previously described, the Matrix Switcher controls both the crosspoint switches and external devices. By combining these two functions, complicated Systems Control applications can be implemented as shown below.



Alarm 3 input by infrared sensor



This seemingly complex operation can be performed by the simple settings shown in table 1 and 2.

T1 (Tour Sequence 1)

Step	0 1	0 2	0 3	0 4	
C A M	0 1	0 4	0 4	0 5	
P R E		0 1	0 2		
D W E L L	0 1	0 3	0 2	3 0	
A U X 1				<input type="checkbox"/>	Gate open
A U X 2				<input type="checkbox"/>	

Table 1 (Setup procedure for Tour Sequence)

Alarm Setting

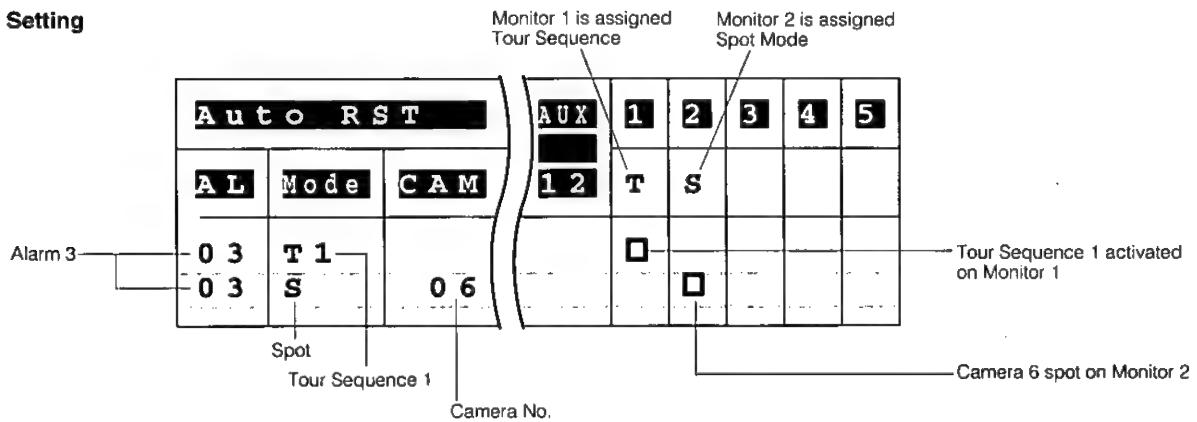


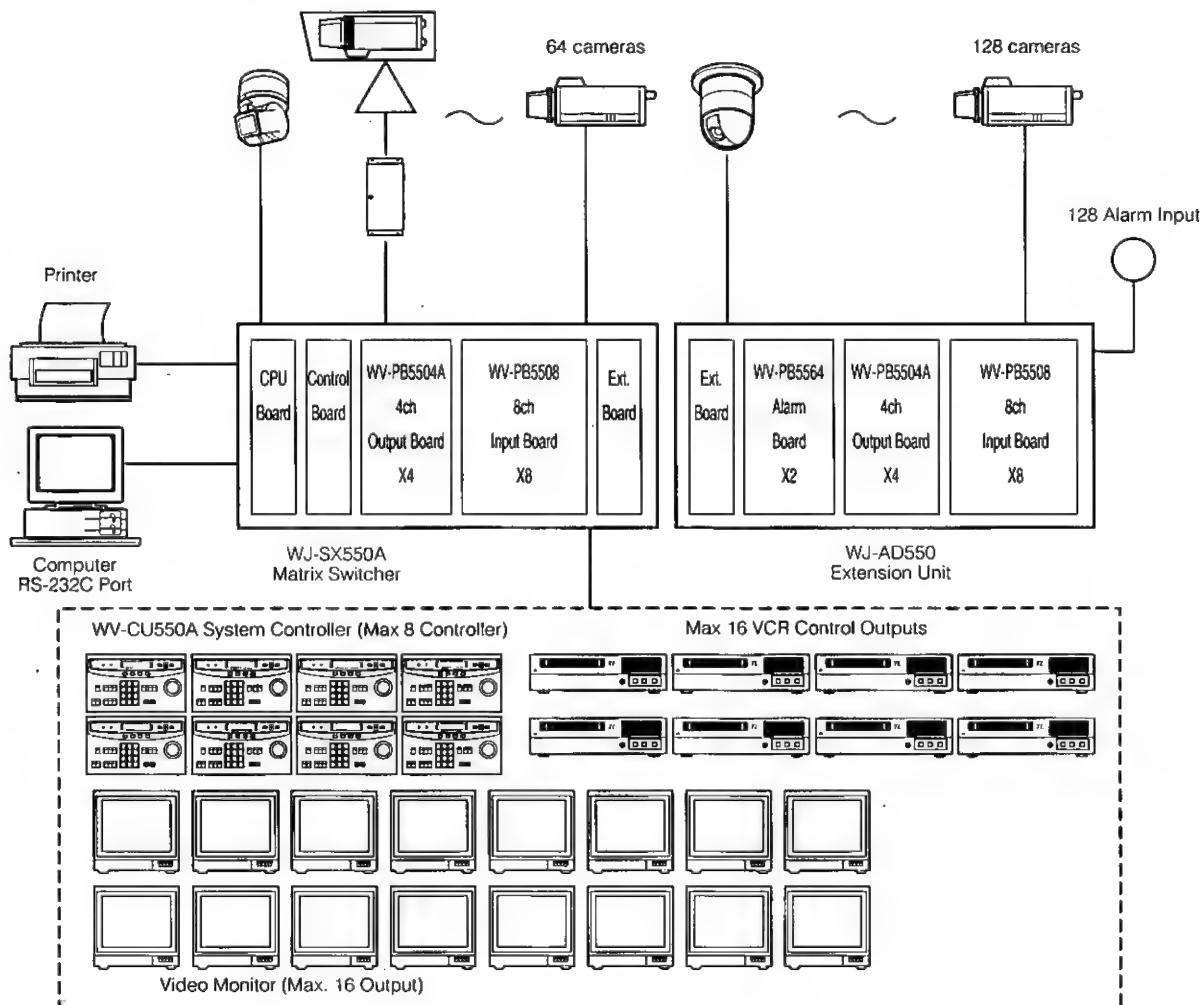
Table 2 (Setup procedure for Alarm Activation)

**FEATURES
OF THE
SYSTEM 500
MATRIX
SWITCHER**

FEATURES OF THE SYSTEM 500 MATRIX SWITCHER

Preface

The system shown below is an example of the expansion capabilities of the WJ-SX550A Matrix Switcher.



Camera Input: Up to 128 cameras can be connected. The pan/tilt head, zoom /focus/iris of the lens and AUX switching can be controlled via a single coaxial cable through a receiver. Also preset control of the lens and pan/tilt head position is possible by using the WV-CS500 or WV-CS604 Combination Camera System.

Monitor Output: Up to 16 monitors can be connected. The camera title, camera and monitor number and alarm condition can be displayed on the monitor screen.

System Controller: Up to 8 controllers may be connected. A variety of controls are accessible through the LCD display on the system controller. Also, access to the Programming Set Up Menu may be gained through the system controller.

VCR: Up to 16 VCRs can be connected. The video signal controlled by the WJ-SX550A Matrix Switcher is supplied to the VCR. Also, the Matrix Switcher can supply the VCRs with an alarm output signal to switch time lapse recording mode.

Alarm Input: Up to 128 alarm signals can be supplied. An Alarm Sensor Unit with a Normally Open or Normally Closed circuit should be used.

Printer Output: The Set Up Menu Programming data can be printed out.

RS-232C Port: A Personal Computer can be used instead of the WV-CU550A System Controller.

Note: When using a Personal Computer, the software must be purchased locally (not supplied with WJ-SX550A Matrix Switcher).

1. Log-in

To operate the Matrix Switcher System 500, a registered operator must first supply their Operator Number and Password to the system controller.

The operator number and password are established by using the Set Up Menu. See page 83 for more details on operator number registration.

If an attempt is made to enter an operator number and password that do not match with the registered operator numbers and passwords, entry into this system is denied. As shown in the examples below, there are 2 additional attributes associated with an operator: operator level and priority. These items are described in more detail on page 19.



Operator Name: Mike
Operator Number: 01
Operator Level: 01
Password: 07171
Priority: 1



Operator Name: Robert
Operator Number: 30
Operator Level: 05
Password: 11524
Priority: 30

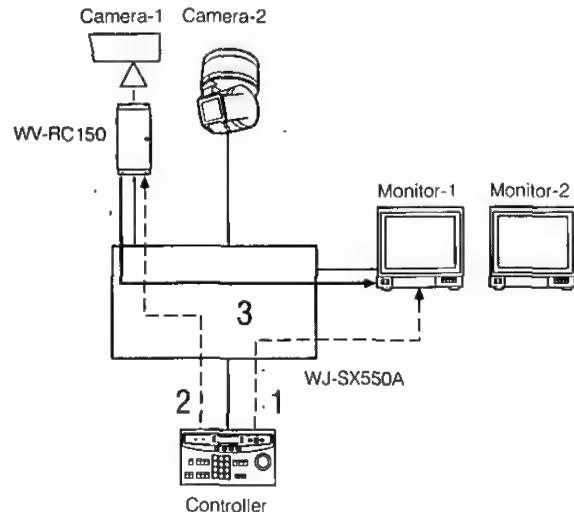
Notes:

1. Initially, Operator Number: 1
Password: 12345
are registered at the factory to allow access for first time system programming.
2. An operator can be logged-in to this system from several system controllers.
3. If the main power of the Matrix Switcher is turned off, log-in procedures must be performed again.
4. If power to the system controller is turned off, the system controller will record operating status when power is resupplied.

2. Camera and Monitor Selection

After log-in, the desired camera and monitor combination can be selected.

Basically, any combination of camera and monitor, which are connected to this unit, can be selected as shown below.



General Procedures

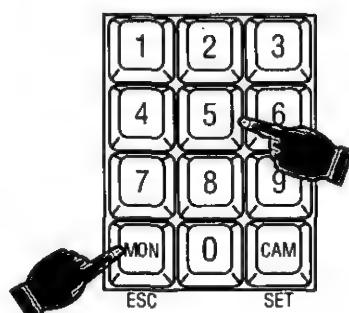
1. Select the desired monitor. (monitor and controller are linked.)
2. Select the desired camera (camera and controller are linked.)
3. The picture of the selected camera is displayed on the selected monitor.

2-1 Monitor Selection

By selecting the monitor with the System Controller, it is linked with the System Controller.

At this time, the camera output signal that was last supplied to the monitor is displayed.

Press the Numeric keys (1 to 16) then press the MON key to select the desired monitor.



For example: When selecting monitor No. 5:
Press 5 then press MON key.

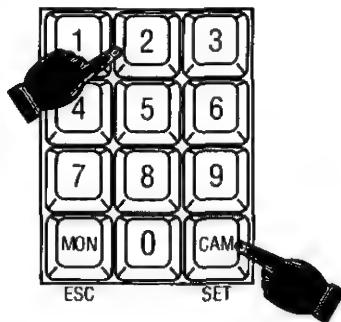
Note: The desired monitor selection may not be available due to one of the following reasons:

1. The System Controller used for selecting a particular monitor is not allowed access to that monitor because of keyboard partitioning. See page 20 for more details.
2. The desired monitor is presently selected by another operator who has a higher operator priority, and therefore, control over that monitor. At this time "Monitor Busy" or "NOT AVAILABLE" will be displayed on the System Controller's LCD panel.

2-2. Camera Selection

The video signal from the desired camera can be supplied to the selected monitor by using the System Controller.

Press the Numeric keys (1 to 128) then press the CAM key to select the desired camera.



For example: When selecting Camera No.2:

Press 2 then press CAM key

Note: The desired camera selection may not be available due to one of the following reasons:

1. The operator is not allowed access to the desired camera because the Operator Registration has limited the operator's access to certain cameras. See page 19 for more details.
2. The desired camera is currently selected by another operator who has a higher operator priority, and therefore, control over that camera. At this time "Camera Busy" will be displayed on the System Controller's LCD panel.

3. Camera Control

The selected camera (and, if applicable, the receiver) can be controlled by the System Controller.

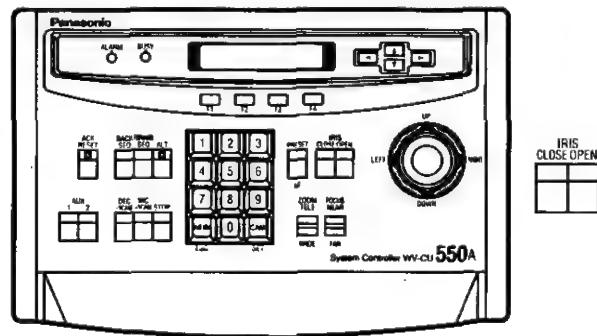
Specified Panasonic cameras, such as the WV-BP510, or the WV-CP610 series, can have various functions controlled remotely without the need for a receiver.

Note: Because future camera models may have additional features and functions, please refer to the Operating Instructions Manual provided with the camera for more details.

4. Accessory Control

4-1. Iris Control

This control is used to open or close the iris of specified DC servo lens with Panasonic WV-BP510, or WV-CP610 series cameras.



4-2. Pan/Tilt Control

This control is used to pan or tilt the pan/tilt head. The following operations are available.

1. Manual Operation

Press the Joystick Controller to move the Pan/Tilt head towards the desired direction. Eight directions are available: UP / DOWN / RIGHT/LEFT / UP-RIGHT / UP-LEFT / DOWN-RIGHT / DOWN-LEFT.

2. Auto Panning Operation

It is necessary to use a Pan/Tilt head such as the WV-7225.

3. Random Panning Operation

It is also necessary to use a Pan/Tilt head which has the auto panning capability such as the WV-7225.

4-3. Auxiliary (AUX) Control

This control is used to turn on or off the user's auxiliary switches located in the Receiver, such as the WV-RC100 or WV-RC150 Receivers.

5. Preset Control

The preset function is used to memorize the setting points of focus, zoom, pan and tilt of a desired scene in advance, and to be able to recall those setting points quickly, according to circumstance.

In addition, if the Camera Position Numbers are registered included the camera numbers with the preset positions in advance, and to be able to recall those camera position quickly activating the camera selection and preset function at the same time.

This control is available with the Panasonic WV-CS500 or WV-CS604 Combination Camera, which enables the setting and recalling of the Preset function from the System Controller.

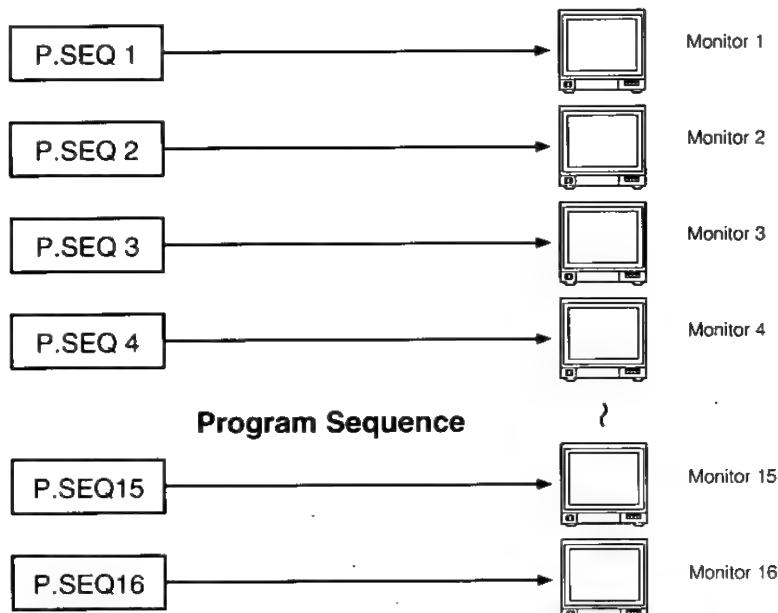
6. Sequence

This system has three kinds of sequential modes: Program, Tour and Group

6-1. Program Sequence

The program sequence is a series of 64 steps assigned to a particular monitor. Each step can have a specific camera assigned to it.

In the Program Sequence, each monitor has its own specified sequence operation as shown below.



• Auto Skip Function

The Auto Skip function is available in sequence. If there is no video signal present at a step, the sequence will automatically skip that step.

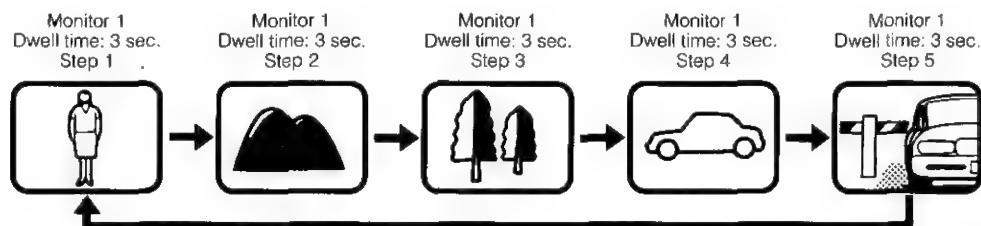
This function is enabled with the Programming Set Up Menu.

• Dwell Time

The amount of time each camera is displayed on the monitor (Dwell Time) can be set from 1 sec. to 30 sec. with 1 sec. increments.

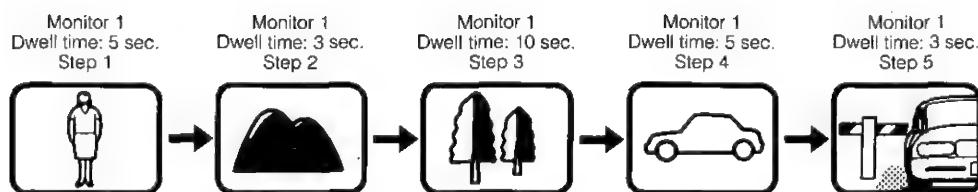
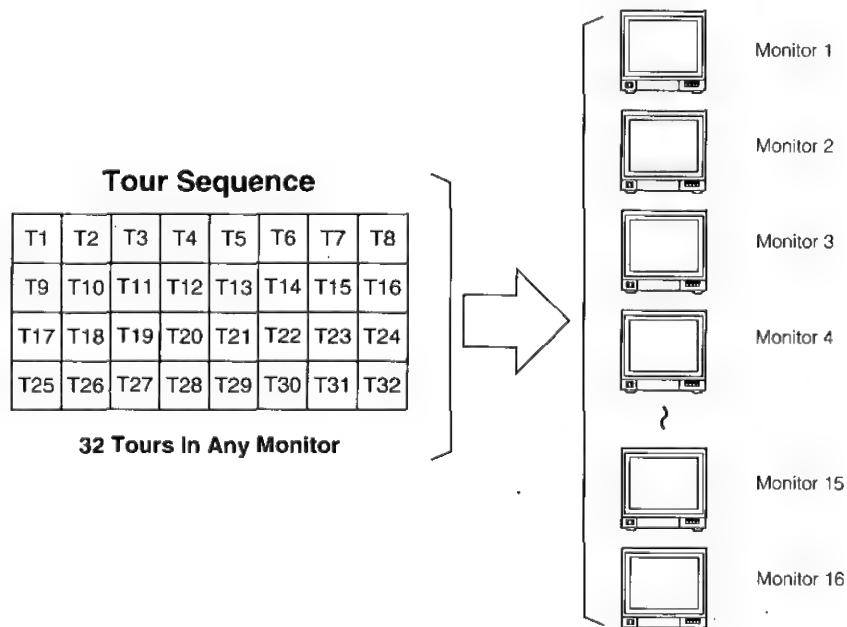
This is set with the Programming Set Up Menu.

Also, External Timing, which is controlled from the Time Lapse VCR, can be selected with the Programming Set Up Menu.



6-2. Tour Sequence

A Tour Sequence consists of 64 steps. Each step has a Camera, Dwell Time, AUX Control and Pan/Tilt Preset assigned to it. A Tour can be assigned to any monitor.



A total of 32 Tour Sequence can be programmed with the Set Up Menu.

6-3. Group Sequence

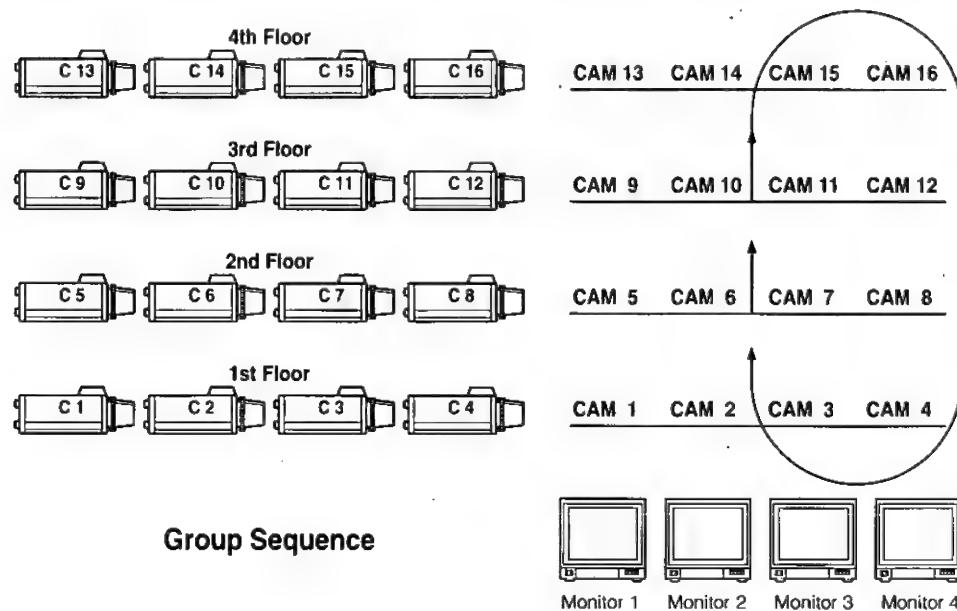
A Group Sequence consists of up to 64 steps.

In each step a maximum of 16 cameras can be assigned to 16 monitors.

Pan/Tilt preset and AUX control 1 & 2 can also be set for each camera/monitor combination.

Camera switching (Dwell Time) for each step can be set from 1 sec. to 30 sec. with 1 sec. increments.

There are 8 Group Sequences available, with programming performed in the Set Up Menu.



7. Timer

The timer function is used to program and automatically activate tour or group sequences from set start times to set stop times during each day of the week and 5 user defined special days.

8. Alarm

8-1. Alarm Input

1. Camera Site Alarm

This alarm signal is supplied from the associated camera site receiver.

The applicable units for camera site alarm inputs are the WV-RC100 and WV-RC150 Receivers.

2. Interface Alarm

This alarm signal is supplied from the Alarm Input Connector on the optional Alarm Board installed in the WJ-SX550A Matrix Switcher.

Up to 128 alarm inputs are available.

8-2. Alarm Operation Mode

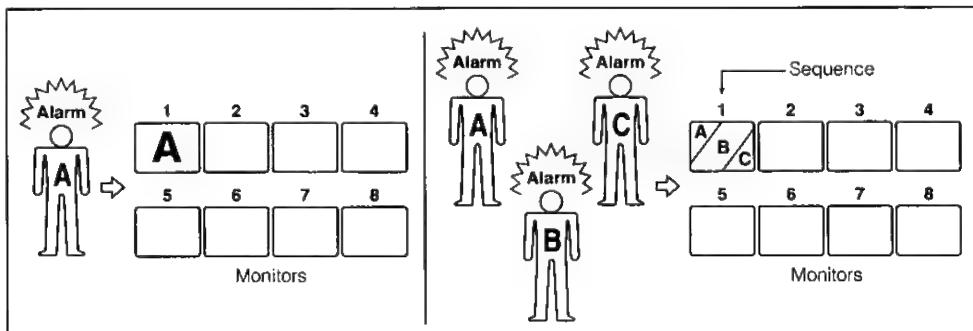
There are three alarm operation modes available in the WJ-SX550A Matrix Switcher.

The alarm modes are able to switch according to the time programmed in an internal timer.

The following are the examples of these modes.

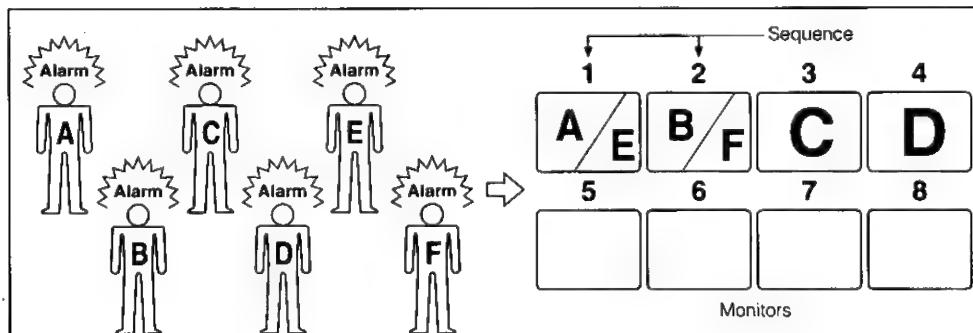
Alarm Mode 1: Any alarms to 1 monitor

Mode 1 displays all alarms on Monitor One. If more than one alarm is activated, the system will sequentially display the alarms on Monitor One.



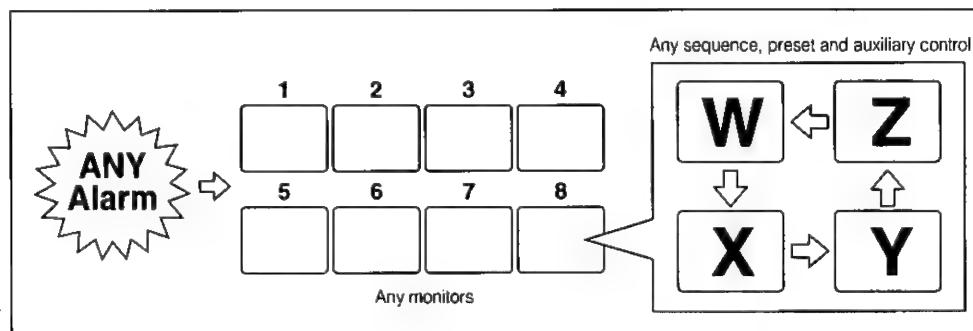
Alarm Mode 2: Any alarms to 4 monitors

Mode 2 displays the first alarm on Monitor One, the second on Monitor Two, the Third on Monitor Three and the fourth on Monitor Four. If more than four alarms are activated, the system will sequence the pictures starting on Monitor One, then two, etc.



Alarm Mode 3: Any alarms to any monitors

Mode 3 is a fully programmable mode. Any alarm can be shown on any monitor plus sequence routines, presets and auxiliary relays in receivers can be activated.



8-3. Alarm Recall

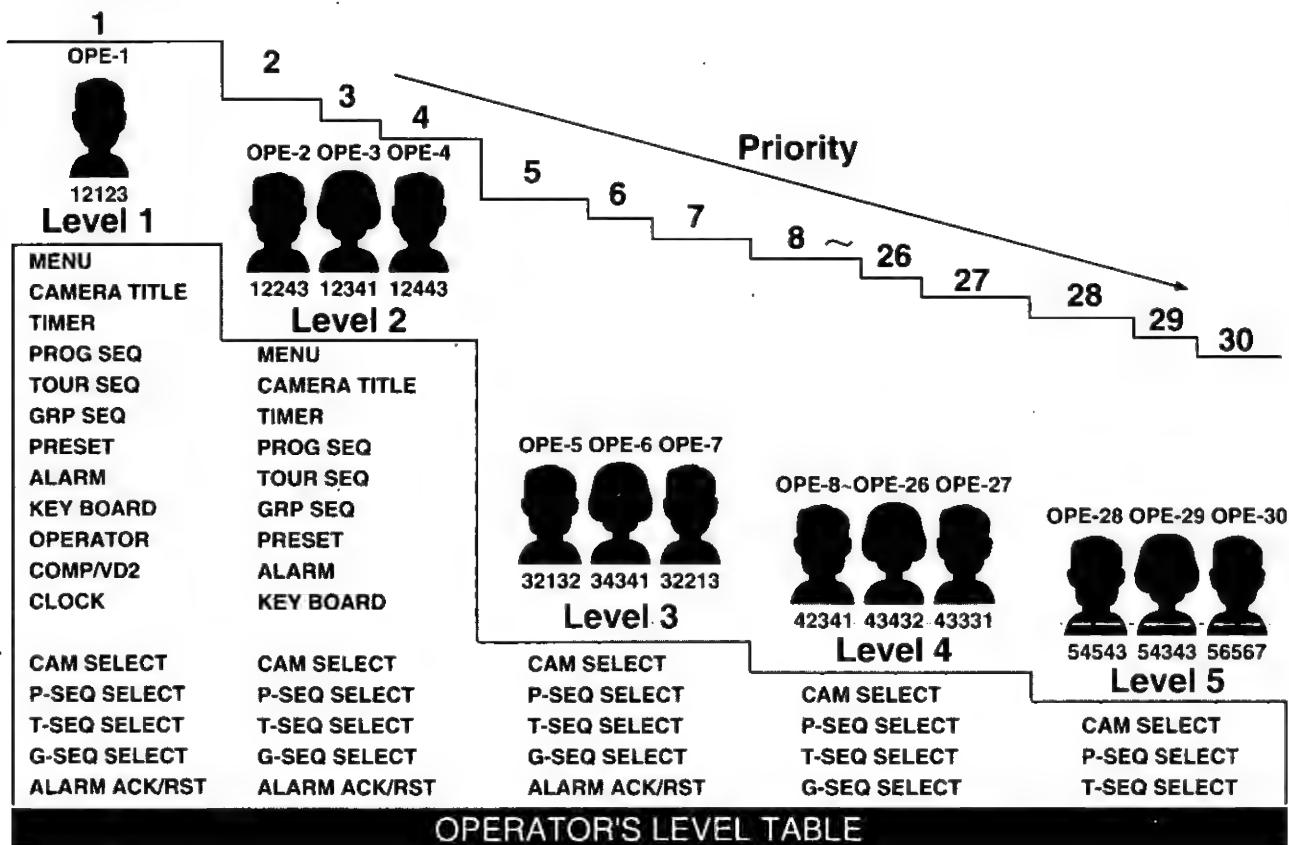
The WJ-SX550A Matrix Switcher can store up to 99 Alarm Events in its memory.

The alarms may be recalled and displayed, in chronological order, on any desired monitor.

9. Operator Registration

In the Operator Registration, an operator's level, priority, password and camera access limits are determined. Up to 30 operators may be registered.

For example:



9-1. Level Setting

Operator access to various set up functions and system operations is dependent upon the operator's level. There are five separate levels available, with level 1 being the highest.

9-2. Priority

When two or more operators attempt to perform the same function at the same time, the operator with the higher priority is allowed to perform the function while the lower priority operator's attempt is denied. There are 30 priority levels available in this system.

9-3. Password

All operators have a five digit long password assigned to them.

9-4. Operator Limits for Camera Access

Access to any camera's video and control of the camera's pan/tilt head may be restricted to certain operators.

10. Camera Title

Camera titles are available for each camera input.

Each title is composed of 15 characters per line, times 2 lines.

11. Status Display

AL	Monitor	Camera	Mode	CTRLR	Operator	Priority
	0 1	1 1	T 0 1 F	1	0 1	0 5
	0 2	2 1	SPOT			0 0
	0 3	0 9	T 0 8 F			
	0 4	4 8	G 2 S			
	0 5	6 3	G 2 S			
	0 6	1 7	G 2 S			
	0 7	1 0	CAM	2	1 1	0 1
	0 8	0 3	SPOT	8	0 2	0 3
	0 9	3 5	T 6 4 F			
1 0	in	0 9	SPOT	4	2 6	1 0
1 1		4 9	T 1 1 F			0 3
1 2		5 3	G 1 B			0 2
1 3		4 9	G 1 B			0 2
1 4		2 6	G 1 B			0 2
1 5		3 0	SPOT			
1 6		5 1	SPOT			

This table shows the system status in real time.

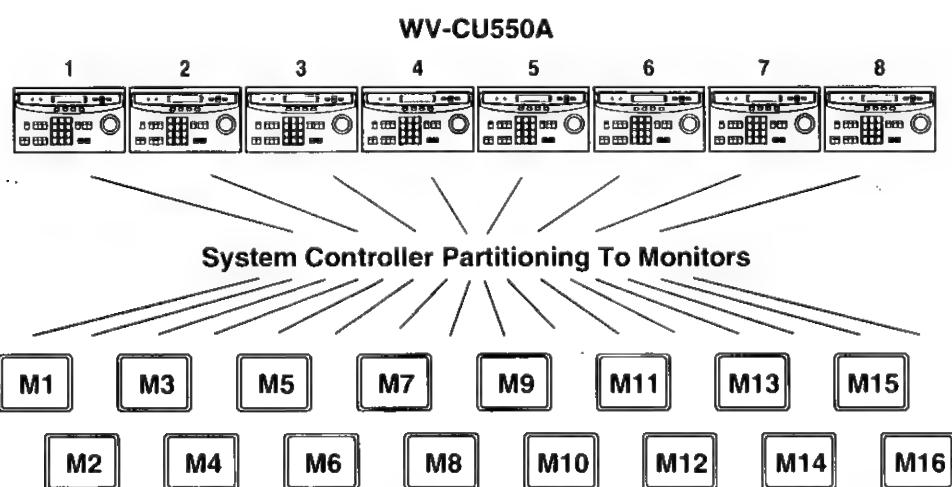
Possible Active modes, as indicated in this table, are defined below.

SPOT : Spot
 P : Program Sequence
 T : Tour Sequence
 G : Group Sequence
 CAM : Camera Setting
 SET : Setup
 in : Displays video connected to the Video Output Board

F : Forward Sequence
 B : Backward Sequence
 S : Stopped

12. System Controller-Monitor Partitioning

This feature is used to prevent specific WV-CU550A System Controllers from controlling the outputs of specific monitors. It prevents an operator from unintentionally gaining control over a monitor that may not be associated with their station.



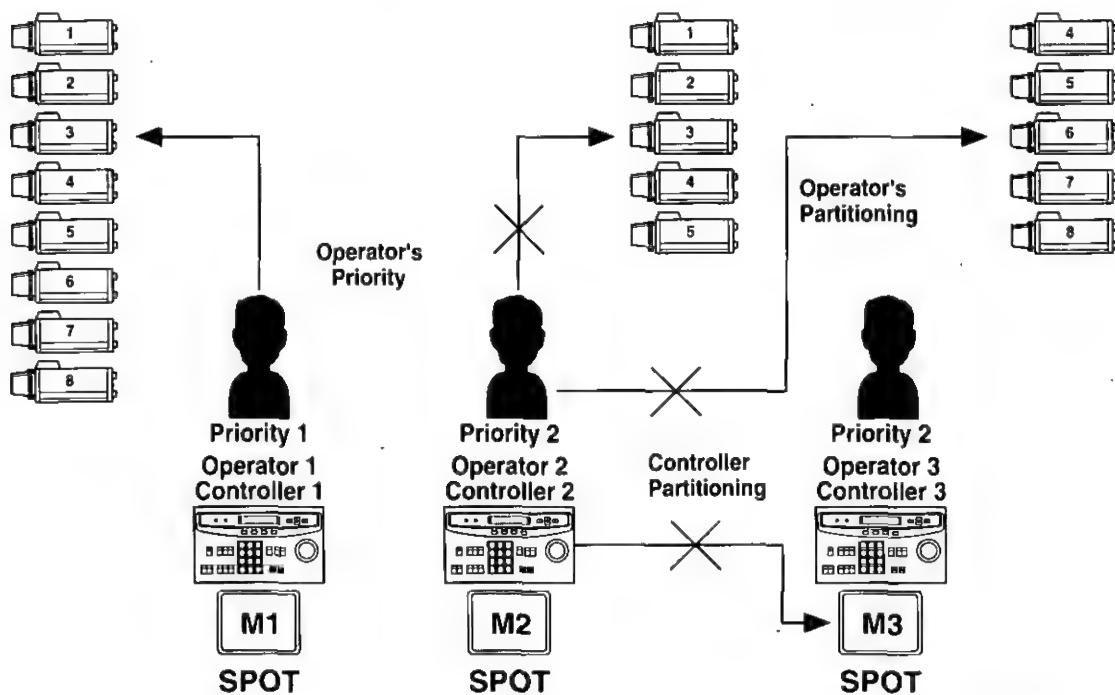
For example:

The following example demonstrates the use of both system controller-monitor partitioning and operator priority.

- Camera: 8 sets
- Monitor: 3 sets
- System Controller: 3 sets
- Operator : 3 persons

Setting Procedure

1. Operator No.1 has first priority. Cameras 1 - 8 can be selected by MON-1.
2. Operator No.2 has second priority. Cameras 1-5 can be selected by MON-2 (limited access due to operator partitioning).
3. Operator No.3 also has second priority. Cameras 4 - 8 can be selected by MON-3.



1. In the above system, when Operators 1 and 2 both select the camera No.3 simultaneously, the selection by Operator 1 is allowed because operator 1 has a higher priority.
2. Operator 2 can not select camera 6 because operator's partitioning limits access to only cameras 1 - 5 by Operator 2.
3. Operator 2 can not control the Monitor 3 because controllers partitioning prevents access to monitor 3 by Operator 2.

13. Synchronizing the Sequence with External Timing

The camera switching interval (Sequence Dwell Time) can be synchronized with the time lapse mode set in the associated Time Lapse VCR.

Select the On or Off mode to meet monitor requirements.

14. Cable Compensation / VD2

Cable Compensation

This feature is used to compensate for signal loss due to cable length.

The most suitable position for cable-loss compensation can be selected in the Set Up Menu.

Available cable length compensations are shown below.

- S: Up to 400m (1,300 ft)
- M: 400m (1,300 ft) to 700m (2,300 ft)
- L: 700m (2,300 ft) to 900m (3,000 ft)

(When using RG-59U, BELDEN 9259 or equivalent)

VD2 (Camera Gen-lock Signal)

The VD2 (Gen-lock Sync Signal) can be turned On or Off by using the Set Up Menu.

Select VD2 On or Off to meet camera requirements.

15. RS-485 Site Communication

The communication parameters between the Camera Site can be set by using the Set Up Menu, if the optional WV-PB5548 Data Board is installed in the Matrix Switcher.

The WV-RM70 Camera Controller or a modem is required in the system.

16. Communication Speed

The data transmitting/receiving rate can be set by using the Set Up Menu.

Usually, the Baud Rate is set to 9,600 bps, with a Wait Time of 100 ms.

Note: Be sure to select the correct speed when using a modem.

17. Clock

A real time, on-screen clock display is available.

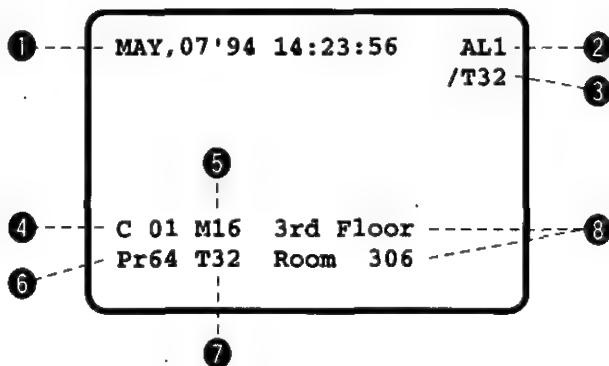
The date and time can be set with the Set Up Menu.

2

18. On Screen Display

The following item can be displayed on the selected monitor screen.

All items, except Alarm On/Off and Timer mode, can be displayed or removed.



- ① Date and Time
- ② Alarm On/Off
 - (ALO: Camera Site Alarm)
 - (AL1: Interface Alarm)
- ③ Timer Mode
- ④ Camera No.
- ⑤ Monitor No.
- ⑥ Preset No.
- ⑦ Sequence Mode in Effect
- ⑧ Camera Title

Note: If the monitor used has excessive overscan, parts of the display may be cut off.

19. Printer

A parallel printer can be used to print out the Status, Alarm Recall or Set Up data.

The recommended printer to use is the Panasonic KX-P1624 Impact Dot Matrix Printer.

20. RS-232C Port

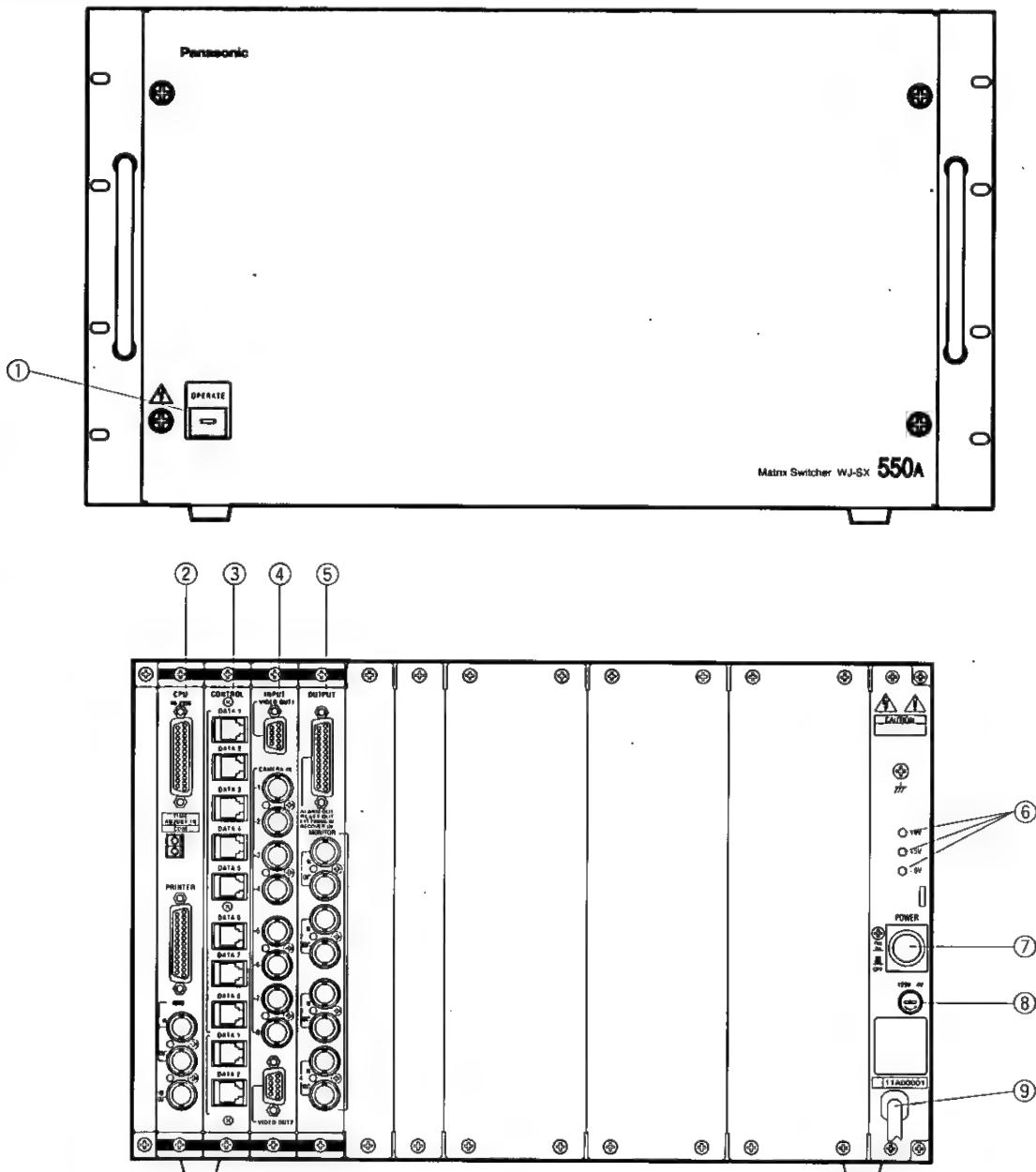
This port used for connecting with a Personal Computer. The memory of the WJ-SX550A Matrix Switcher can be loaded or saved. Also, a Personal Computer can be substituted for the WV-CU550A System Controller.

Note: The software required for this operation, is an optional purchase.

**DETAILED
PRODUCT
DESCRIPTION
AND
SELECTION**

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

WJ-SX550A Matrix Switcher



1. Operation Indicator (OPERATE)

This indicator lights up when the WJ-SX550A Matrix Switcher is turned power on.

2. CPU Board (CPU)

The personal computer and printer connect to this board.
Refer to the CPU Board on page 25 for more details.

3. Control Board (CONTROL)

The system controller connects to this board.
Refer to the Control Board on page 28 for more details.

4. Video Input Board (INPUT)

The cameras and receivers connect to this board.
Refer to the Video Input Board on page 30 for more details.

5. Video Output Board (OUTPUT)

The monitors connect to this board.
Refer to the Video Output Board on page 32 for more details.

6. Voltage Indicator (+9V, +5V, -5V)

These LEDs indicate the presence of +9V, +5V and -5V regulated DC voltages.

7. Power On/Off Switch (POWER ON/OFF)

This switch is used to turn the Matrix Switcher power on or off.

8. Fuse Holder

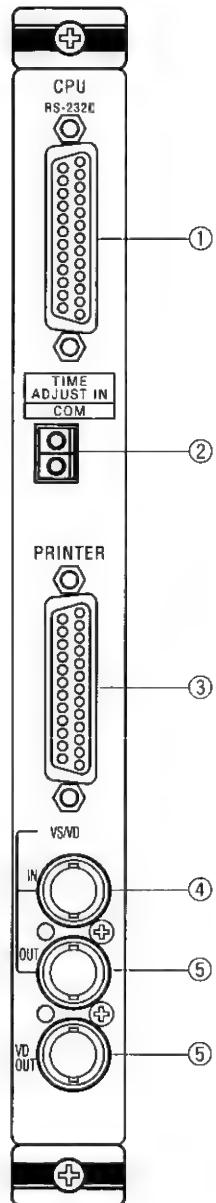
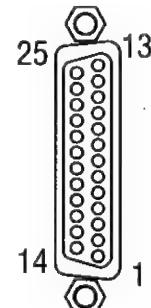
9. Power Cord

CPU Board

1. RS-232C Port (RS-232C)

This port is used to connect a personal computer that can store or load the memory in the WJ-SX550A Matrix Switcher. Also, this port enables control of the Matrix Switcher with a personal computer instead of the WV-CU550A System Controller (by using optional software).

Pin No.	Designation	Direction
1	(FG)	
2	SD	PC → Switcher
3	RD	PC ← Switcher
4	RS	PC → Switcher
5	CS	PC ← Switcher
6	DR	PC ← Switcher
7	SG	
8	CD	PC ← Switcher
20	ER	PC → Switcher
Other pins are not used.		

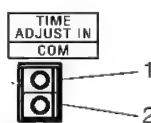


3

2. Time Adjustment Input Connector (TIME ADJUST IN)

This connector accepts the time adjustment signal from a Time Lapse VCR. It enables the time display of the WJ-SX550A Matrix Switcher and the Time Lapse VCR to be matched.

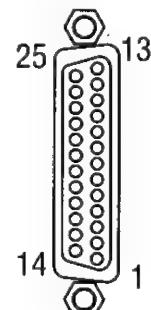
Pin No.	Designation
1	Signal
2	Ground



3. Printer Port (PRINTER)

This port is used to connect a parallel printer which can provide a print out of the Status, Alarm Recall or Set Up operation data.

Pin No.	Designation	Direction
1	/STROBE	Printer ← Switcher
2	DATA 0	Printer ← Switcher
3	DATA 1	Printer ← Switcher
4	DATA 2	Printer ← Switcher
5	DATA 3	Printer ← Switcher
6	DATA 4	Printer ← Switcher
7	DATA 5	Printer ← Switcher
8	DATA 6	Printer ← Switcher
9	DATA 7	Printer ← Switcher
10	/ACK	Printer → Switcher
11	BUSY	Printer → Switcher
12	(R)	Monitor ← Switcher
13	(G)	Monitor ← Switcher
14	(B)	Monitor ← Switcher
15	(SYNC)	Monitor ← Switcher
16	/PRIM	Printer ← Switcher
17	Not used	
18	Not used	
19	Ground	
20	Ground	
21	Ground	
22	Ground	
23	Ground	
24	Ground	
25	Ground	



Note: If a printer is not used in the system, pins 12 - 15 may be used to supply system status to a monitor (RGB type input).

4. VS/VD Input Connector (VS/VD IN)

Either the VD (Vertical Drive) pulse or the VS (Video, Sync) signal can be supplied to this connector for synchronizing the system.

Notes:

1. This input is a looping through connection to the VS/VD Output Connector.
2. When the VD (or VS) signal is supplied to the VS/VD Input Connector, turn the VD/VS selection switch (SW4) on the circuit board to the VD (or VS) position. Initially, the VD/VS selection switch (SW4) is set to the VS position at the factory. Ask qualified service personnel about setting up this switch.
3. The external sync signal should meet with EIA RS-170 specifications and should not contain any jitter, such as a VCR playback signal.

5. VS/VD Output Connector (VS/VD OUT)

Either the VD (Vertical Drive) pulse or the VS (Video, Sync) signal is provided at this connector for synchronizing other system components.

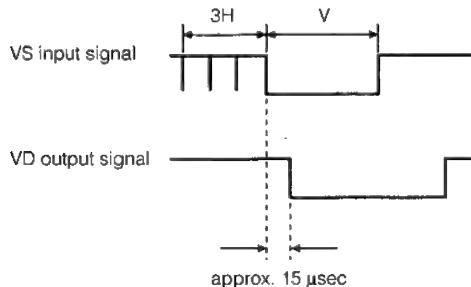
Note: This output is a looping through output of the VS/VD Input Connector. These inputs and outputs are connected internally.

6. VD Output Connector (VD OUT)

The VD (Vertical Drive) pulse is provided at this connector for synchronizing other system components.

Notes:

1. The internal VD pulse or the looping-through external VD pulse will be provided at this connector.
2. When the VS signal is supplied to the VS/VD Input Connector, the VD output signal from the VD Output Connector will be delayed by approximately 15 μ sec with respect to the V-sync of VS input signal.

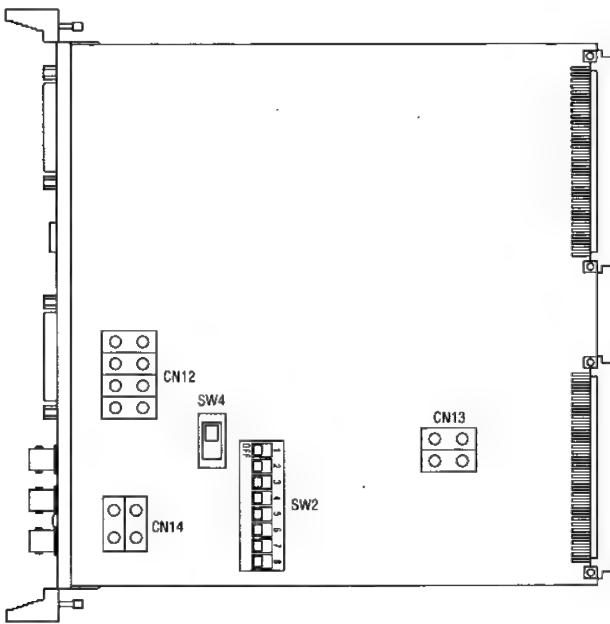


By changing the position of jumper connector (CN14) on the board, this connector can be used as the monitor output for the system status display. (Set Up Menu is displayed during Set up mode.)

Caution

This board should be installed in the WJ-SX550A Matrix Switcher even if the WJ-AD550 Extension Unit is used.

■ CPU Board Dip Switch and Jumper Setting

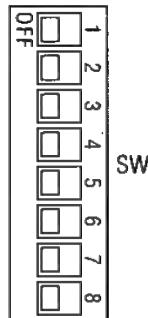


1. Confirm Switches (SW2) on the board are set to the following positions.

Note

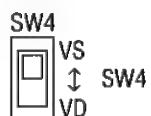
These switches are used only for factory test.

Always keep these switches in the "OFF" positions in the field.

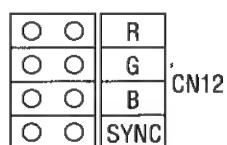


SW2

2. Set the switch (SW4) on the board to match the Sync. input signal, if applicable. Initially, VS position is selected at the factory.



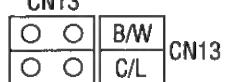
3. Set the jumper connectors (CN12) on the board to open connection position when a printer is connected to the board.



CN12

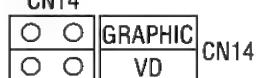
4. Set the jumper connector (CN13) on the board to the "C/L" position when the set up menus are not clearly displayed on the color monitor.

Initially, the "B/W" position is selected at the factory.



CN13

5. Set the jumper connector (CN14) on the board for either VD Output or Status Output from the VD Output Connector. Initially, the VD position is selected at the factory.



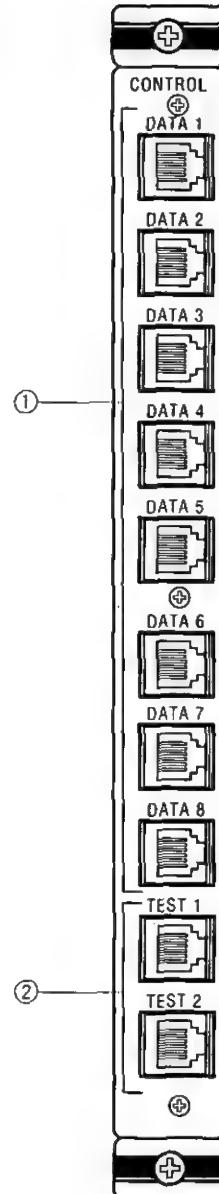
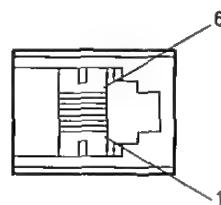
CN14

Control Board

1. Data Port (DATA 1 - 8)

These ports are used to transmit/receive control data to/from the WV-CU550A System Controller. Eight ports are available on the board. Connect supplied 6-conductor cable assembly or use data grade cable, suitable for RS-485 (2 shielded, twisted pairs). Cable length may be extended up to 1,200m (4,000 ft).

Pin No.	Designation	Direction
1	Ground	
2	T (A)	Controller → Switcher
3	T (B)	Controller → Switcher
4	R (A)	Controller ← Switcher
5	R (B)	Controller ← Switcher
6	Ground	



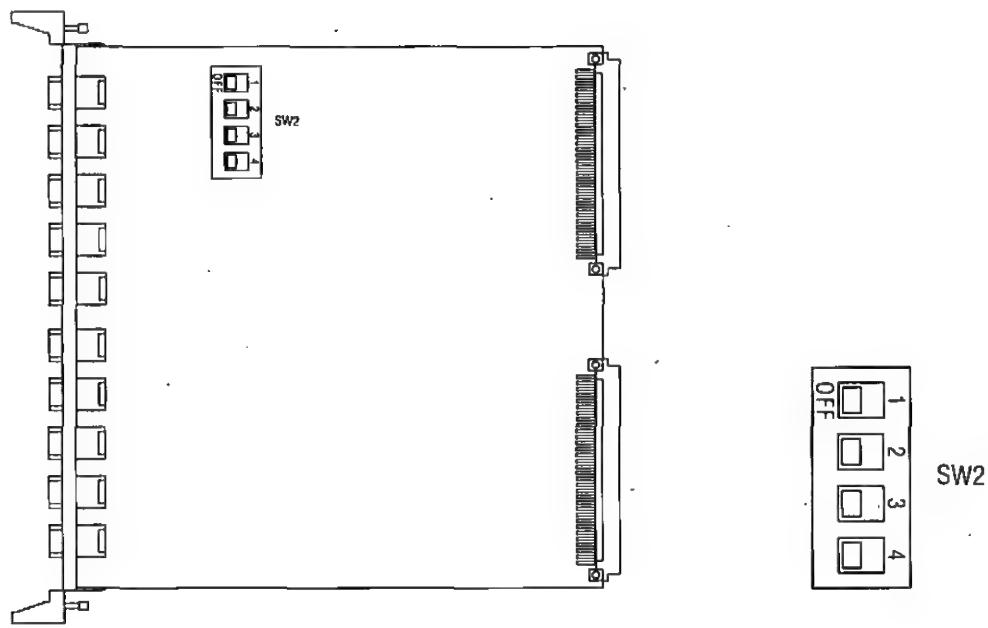
2. Test Port (TEST 1, 2)

These ports are used only for factory test.

Caution

This board should be installed in the WJ-SX550A Matrix Switcher even if the WJ-AD550 Extension Unit is used.

■ Control Board Dip Switch Setting



Confirm switches (SW2) on the board are set to the following positions.

Note

These switches are used only for factory test.

Always keep these switches in the "OFF" positions in the field.

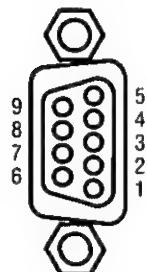
WV-PB5508 Video Input Board

1. Video Output Connector (VIDEO OUT.1, 2)

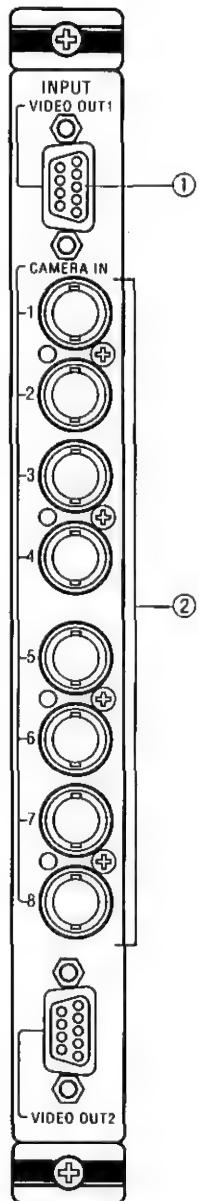
The video signal connected to the Camera Input Connector (CAMERA IN) is looped through to this connector with 75 ohms termination.

The camera control signal multiplexed on the video signal has been eliminated at this connector. When the Power Switch of the Matrix Switcher is turned off no signal is obtained at this connector.

BNC female connectors are available by use of optional WV-CA64 loop through cable.



Pin No.	VIDEO OUT 1	VIDEO OUT 2
1	Not used	Not used
2	CH1	CH5
3	Ground (CH1)	Ground (CH5)
4	CH2	CH6
5	Ground (CH2)	Ground (CH6)
6	CH3	CH7
7	Ground (CH3)	Ground (CH7)
8	CH4	CH8
9	Ground (CH4)	Ground (CH8)



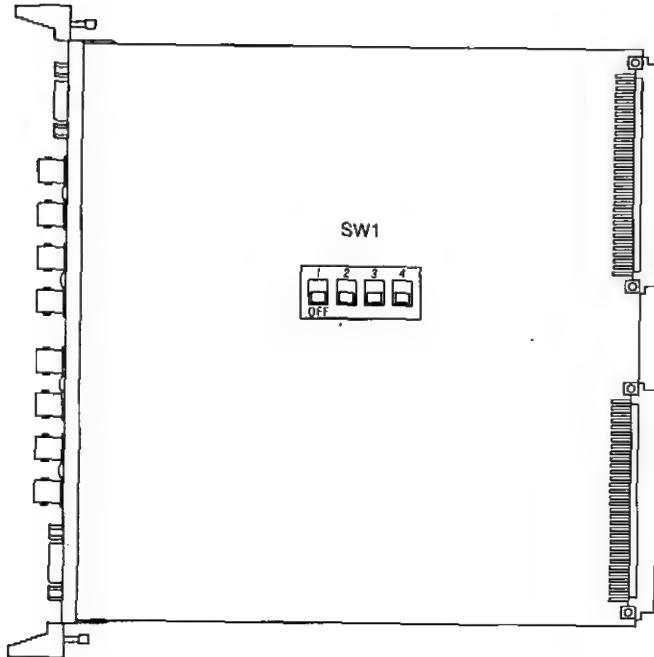
2. Camera Input Connector (CAMERA IN, 1 - 8)

This connector accepts either a color or B/W composite video signal from the camera.

Also, VD2, to synchronize cameras in vertical timing, and data, to control camera site devices such as receivers, intelligent cameras, and combination cameras, are multiplexed through this connector.

■ WV-PB5508 Video Input Board Dip Switch Setting

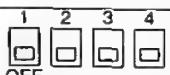
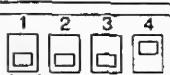
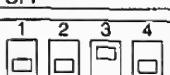
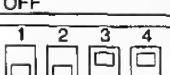
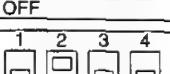
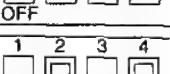
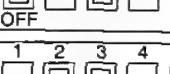
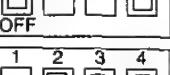
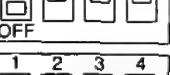
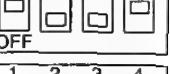
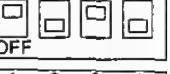
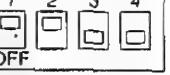
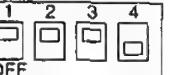
Set switches (SW1) on the board to meet the camera input number as shown in the following table.
Initially, camera input 1-8 is selected at the factory.



Caution

- The Camera Inputs 65 to 128 are only used when the WJ-AD550 Extension Unit is used.
- The Board Number 1 to 8 should be installed in the WJ-SX550A Matrix Switcher and the Board Number 9 to 16 are installed in the WJ-AD550 Extension Unit.

Do not install more than nine(9) boards in the WJ-SX550A Matrix Switcher.

BOARD NO.	CAMERA IN NO.	SW1 SETTING
1	1-8	
2	9-16	
3	17-24	
4	25-32	
5	33-40	
6	41-48	
7	49-56	
8	57-64	
9	65-72	
10	73-80	
11	81-88	
12	89-96	
13	97-104	
14	105-112	
15	113-120	
16	121-128	

■ WV-PB5504A Video Output Board

1. Alarm Output/Reset Output Connector (ALARM OUT/RESET OUT)

External Timing Input Connector (EXT TIMING IN)

Recover Input Connector (RECOVER IN)

ALARM OUT: When the Matrix Switcher receives an alarm from the WV-PB5564 Alarm Board or camera site receivers WV-RC100 or WV-RC150, the alarm output signal is provided at this connector for the Time Lapse VCR. The active pin number of the alarm output depends on the alarm mode set by the on-screen program (Mode-1, Mode-2, Mode-3).

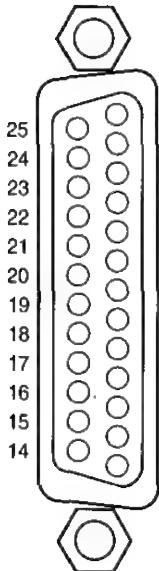
RESET OUT: When the Matrix Switcher resets the activated alarm, the alarm reset output signal, either Open Collector or pulse, is provided at this connector for the Time Lapse VCR.

EXT TIMING IN: The camera switching interval (Sequential Dwell Time) can be synchronized with the lapse mode set in the Time Lapse VCR.

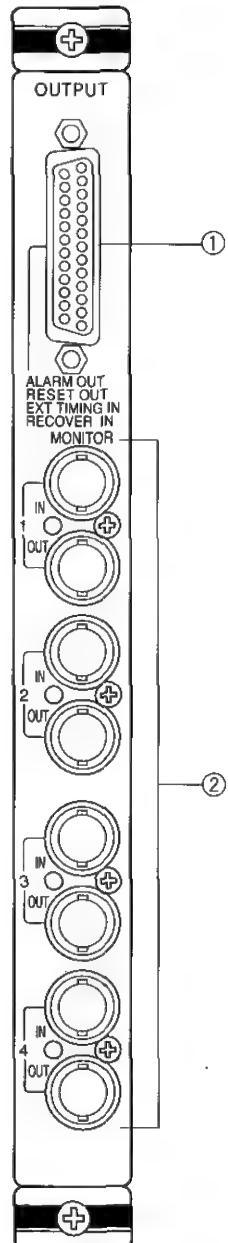
EXT. TIMING IN 1 controls Monitor 1 output, EXT. TIMING IN 2 controls Monitor 2 output, etc.

Supply the camera switching pulse from the Time Lapse VCR to this connector. Minimum duration for camera switching pulse needs to be more than one (1) second.

RECOVER IN: This connector accepts the alarm recover signal from the Time Lapse VCR.



Pin No.	Designation
1	ALARM OUT 1
2	RESET OUT 1
3	RECOVER IN 1
4	Ground
5	EXT TIMING IN 1
6	Ground
7	ALARM OUT 2
8	RESET OUT 2
9	RECOVER IN 2
10	Ground
11	EXT TIMING IN 2
12	(+5V DC)
13	ALARM OUT 3
14	RESET OUT 3
15	RECOVER IN 3
16	Ground
17	EXT TIMING IN 3
18	Ground
19	ALARM OUT 4
20	RESET OUT 4
21	RECOVER IN 4
22	Ground
23	EXT TIMING IN 4
24	Ground
25	Ground



2. Monitor Input/Output Connector (MONITOR IN/OUT)

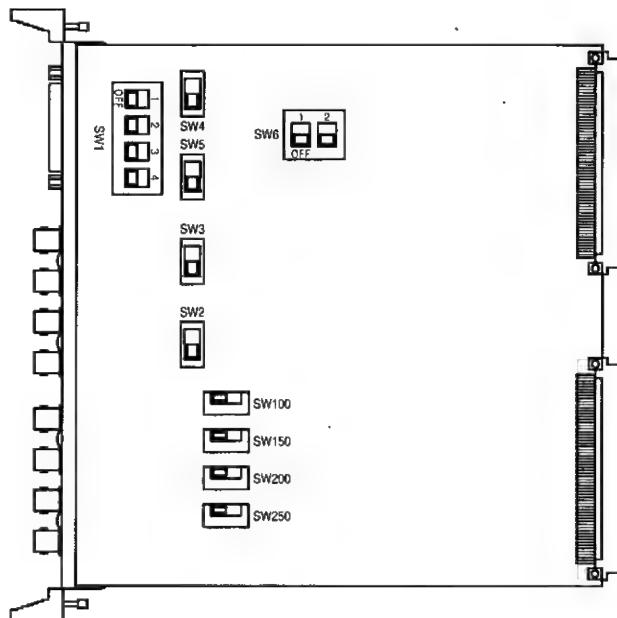
OUT: The video signal selected by the Matrix Switcher is provided at this connector for the video monitor.

IN: This connector is used for video input from a VCR or system expansion to 128 camera input.

■ WV-PB5504A Video Output Board Dip Switch Setting

- Set switches (SW1) on the board to meet the monitor output number as shown in the following table.
Initially, monitor 1 - 4 is selected at the factory.

BOARD NO.	MONITOR OUT NO.	SW1 SETTING
1	1-4	
2	5-8	
3	9-12	
4	13-16	
5	1-4	
6	5-8	
7	9-12	
8	13-16	



Caution

- The Board Number 5 to 8 are only used when the WJ-AD550 Extension Unit is used.
- The Board Number 1 to 4 should be installed in the WJ-SX550A Matrix Switcher and the Board Number 5 to 8 are installed in the WJ-AD550 Extension Unit. Do not install more than five (5) boards in the WJ-SX550A Matrix Switcher.

- Set switches (SW2/SW3/SW4/SW5) on the board to choose the alarm reset output signal as either Open Collector (OPEN C.) or Pulse (VTR).

Open Collector (OPEN C.): 16VDC 100mA max.

Pulse (VTR): +5VDC approx. 500 msec.

Initially, VTR positions are selected at the factory.



Note

Be careful when setting these switches as the switches are not physically located on the board in numerical order. Switch location from the top of the board, going downward, is: SW4 (reset out 3), SW5 (reset out 4), SW3 (reset out 2) and SW2 (reset out 1).

- Set switches (SW100/SW150/SW200/SW250) on the board to choose the character display mode on the monitor.

NOR: White with Black border

REV: Black with White border

Initially, normal (NOR) positions are selected at the factory.



NOR Position



REV Position

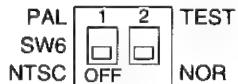
BOARD NO.	MONITOR OUT NO.			
	SW100	SW150	SW200	SW250
1 (5)	1	2	3	4
2 (6)	5	6	7	8
3 (7)	9	10	11	12
4 (8)	13	14	15	16

- Confirm switches (SW6) on the board are set to the following positions.

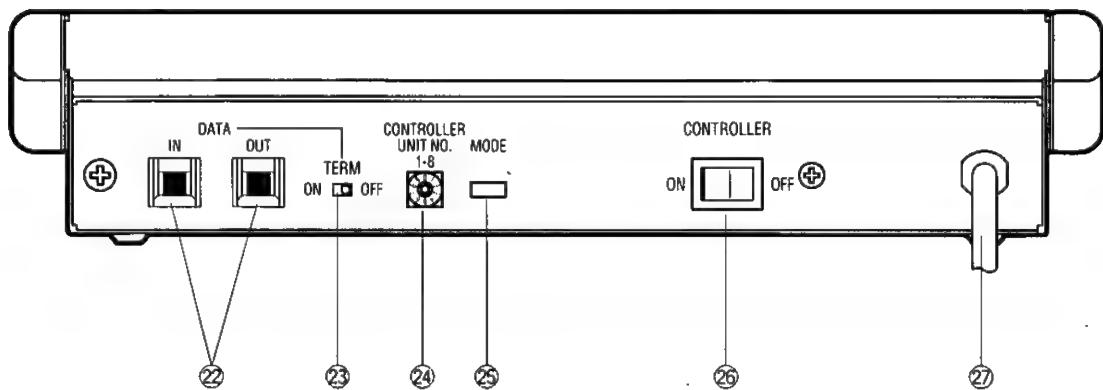
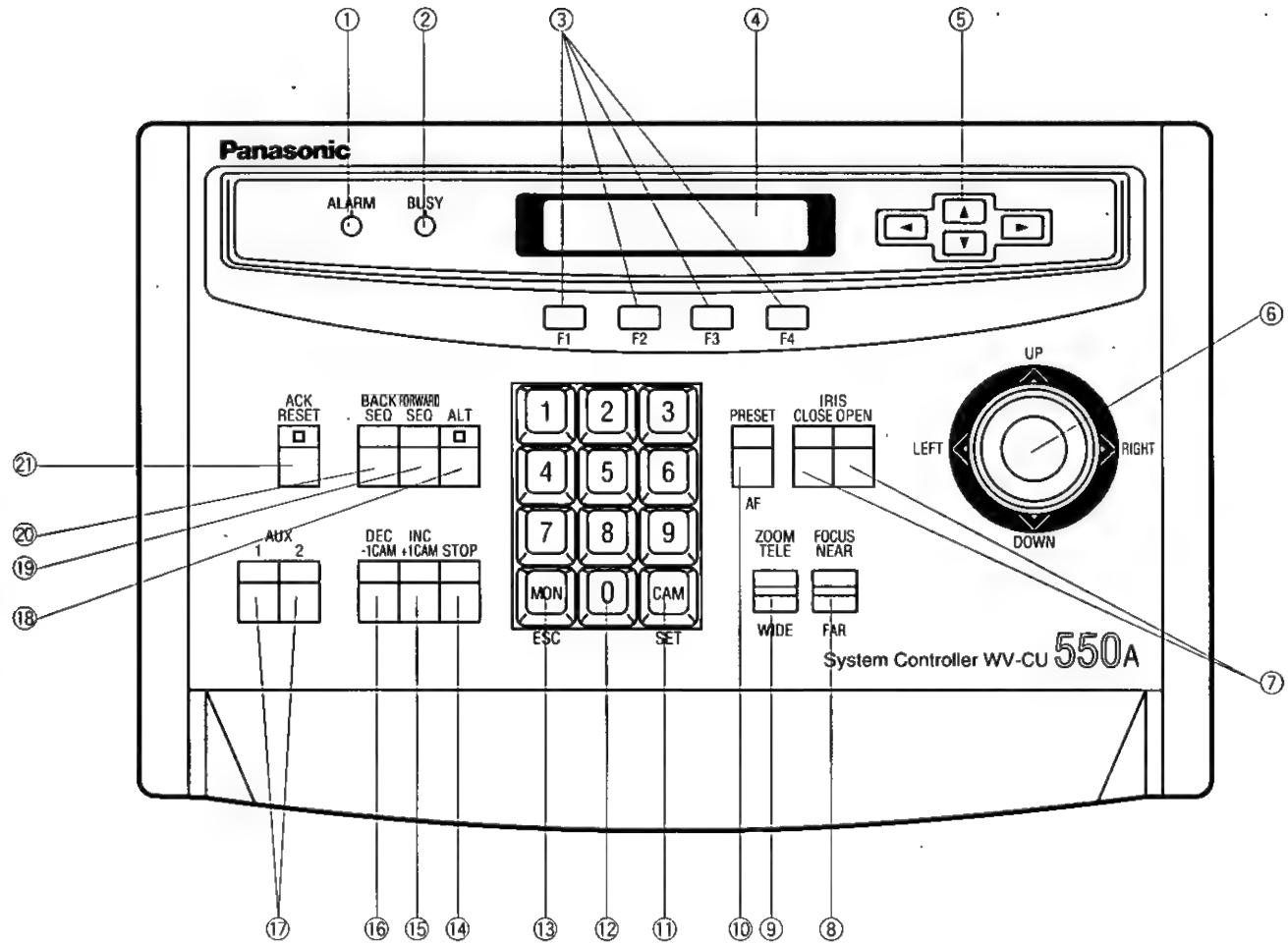
Note

These switches are used only for factory test.

Always keep these switches in the "OFF" positions in the field.



WV-CU550A System Controller



1. Alarm Indicator (ALARM)

This LED indicator blinks to indicate an alarm condition exists.

2. Busy Indicator (BUSY)

This LED indicator lights up when one or more System Controllers with a higher operator priority than this one are used to perform a function with the same camera or monitor at the same time.

While this indicator is lighted, operations from this System Controller are deactivated and can not be performed until the indicator goes off.

3. Function Keys (F1/F2/F3/F4)

These keys are used to select functions displayed on the Liquid Crystal Display.

4. Liquid Crystal Display

This displays function menus and function status. In this Instructions Manual it is hereafter referred to as the "LCD".

5. Cursor Keys (◀, ▶, ▲, ▼)

These keys are used to select which function menus are displayed on the LCD.

6. Joystick Controller (UP/DOWN/LEFT/RIGHT)

This Joystick is used to operate the Pan/Tilt Head manually, or to move the cursor to the desired position on the Set Up Menu of the Matrix Switcher.

7. Lens Iris Switches (IRIS CLOSE, OPEN)

These switches are used to close or open the lens iris of specified lenses mounted on the camera.

When these switches are pressed at the same time for 3 seconds, the lens iris is set to the factory preset condition.

8. Focus Control (FOCUS NEAR/FAR)

This control is used to adjust lens focus of specified lenses mounted on the camera.

9. Zoom Control (ZOOM TELE/WIDE)

This control is used to adjust lens zoom of specified lenses mounted on the camera.

10. Preset Switch (PRESET)

Auto Focus Switch (AF)

PRESET: This switch, in combination with the Numeric Keys, is used to activate the preset function of the WV-CS500 or WV-CS604 Combination Camera.

AF: This switch is used to activate the auto focus function when selected the specified camera such as the WV-CS604 Combination Camera.

11. Camera Key (CAM)

Set Key (SET)

CAM : This key is used for camera selection. Press the desired Numeric Keys then press this key to select the camera.

SET : This key is used to execute the currently highlighted setting on the Set Up Menu of the Matrix Switcher.

12. Numeric Keys (0 - 9)

These keys are used for numeric input into the system such as camera and monitor select, sequence, etc.

13. Monitor Key (MON)

Escape Key (ESC)

MON : This key is used for monitor selection. Press the desired Numeric Keys then press this key to select the monitor.

ESC : This key is used to escape the currently highlighted setting on the Set Up Menu of the Matrix Switcher.

Press this key, after pressed the Alternate (ALT) Switch, to display the video systematically, which is connected to the Monitor Input (MONITOR IN) Connector on the WV-PB5504A Video Output Board.

14. Stop Switch (STOP)

This switch is used to stop a sequence that is being run on a monitor.

15. Increment Switch (INC +1 CAM)

This switch is used to move a sequence one step forward from the step that was previously stopped on the monitor by the Stop (STOP) Switch.

Also, when a selected monitor is in the spot mode, pressing this switch will replace the presently selected camera with the next higher camera number.

16. Decrement Switch (DEC - 1 CAM)

This switch is used to move a sequence one step backward from the step that was previously stopped on the monitor by the Stop (STOP) Switch.

Also, when a selected monitor is in the spot mode, pressing this switch will replace the presently selected camera with the next lower camera number.

17. Auxiliary Switches (AUX 1,2)

These switches are used to control the auxiliary switches inside the Receiver (WV-RC100 or WV-RC150).

For example, these auxiliary switches can be used for turning on and off a light, a buzzer, etc.

18. Alternate Switch (ALT)

This switch, in combination with the other switch, is used to activate the special functions.

19. Forward Sequence Switch (FORWARD SEQ)

This switch, in combination with the Numeric Keys, is used to start a program or tour sequence on a monitor, or to continue a sequence, in the forward direction, that was previously stopped on a monitor by the Stop (STOP) switch.

20. Backward Sequence Switch (BACK SEQ)

This switch is used to continue a sequence, in the backward direction, that was previously stopped on a monitor by the Stop (STOP) Switch.

21. Alarm Acknowledge and Reset Switch (ACK RESET)

This switch is used to cancel an active alarm. To cancel an alarm, the alarmed monitor (s) must first be selected, then this switch must be pressed once for alarm acknowledgement (the light blinks rapidly), then this switch must be pressed once again for alarm reset.

After alarm acknowledgement, press the Alternate (ALT) Switch then press this switch to reset the all activated alarms at once.

22. Data Input/Output Connectors (DATA IN, OUT)

These connectors are used to transmit/receive control data to/from the WJ-SX550A Matrix Switcher in a system.

23. Termination Switch (TERM ON/OFF)

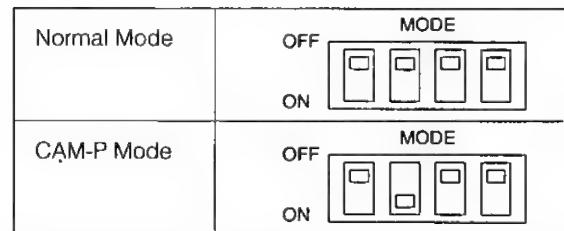
This switch is used to enable termination of this controller's data connector.

24. Controller Unit Number Switch (CONTROLLER UNIT NO.)

This switch is used to identify the unit number of the System Controller in multiple system controller applications. Up to eight controllers can be installed in a system.

25. Mode Selection Switch (MODE)

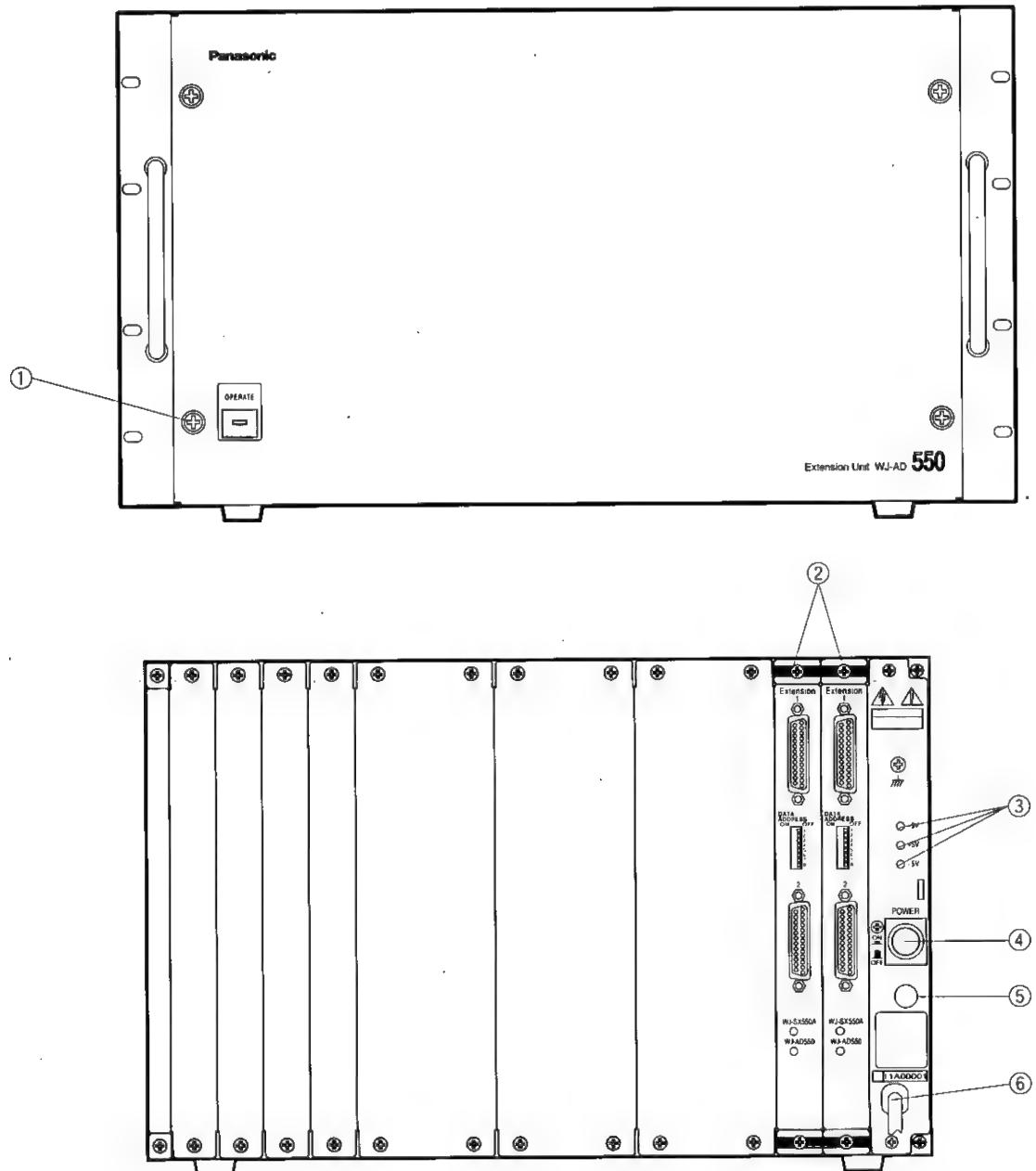
These switches are used to select the mode of the System Controller connected to the Matrix Switcher. Select the switches as shown below.

**26. Controller On/Off Switch (CONTROLLER ON/OFF)**

This switch is used to turn power on and off to the System Controller.

27. Power Cord

WJ-AD550 Extension Unit



1. Operation Indicator (OPERATE)

This indicator lights up when the WJ-AD550 Extension Unit is turned power on.

2. Extension Board (EXTENSION)

One of these boards is used to install in the WJ-SX550A Matrix Switcher. Connect these boards by supplied 25-pin Connection Cables to expand the Matrix Switcher System.

Refer to the Extension Board on page 38 for more details.

3. Voltage Indicator (+9V, +5V, -5V)

These LEDs indicate the presence of +9V, +5V and -5V regulated DC voltages.

4. Power On/Off Switch (POWER ON/OFF)

This switch is used to turn the Extension Unit power on or off.

5. Fuse Holder

6. Power Cord

Extension Board

1. Extension Connector (.1, 2)

These connectors are used to expand the Matrix Switcher System. Connect each connector between the boards that are installed in the WJ-SX550A Matrix Switcher and WJ-AD550 Extension Unit.

2. Data Unit Address Switch (DATA ADDRESS ON/OFF)

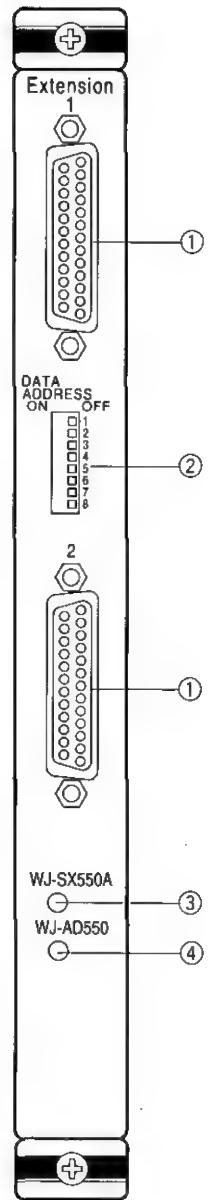
These switches are used to identify the unit address number of the WV-PB5548 Data Board installed in the WJ-AD550 Extension Unit. Select the switches on the board that is installed in the WJ-SX550A Matrix Switcher, to the "ON" position to meet the Data Board Number.

3. WJ-SX550A Indicator (WJ-SX550A)

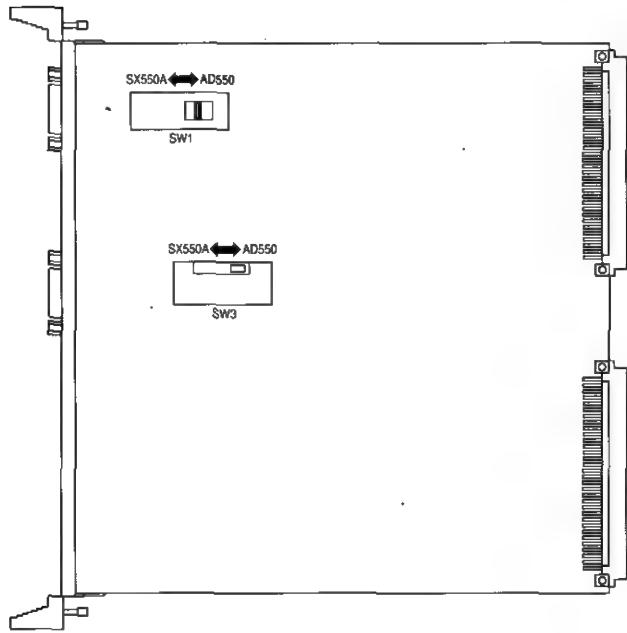
This indicator lights up if the board is installed in the WJ-SX550A Matrix Switcher after making switch setting.

4. WJ-AD550 Indicator (WJ-AD550)

This indicator lights up if the board is installed in the WJ-AD550 Extension Unit after making switch setting.

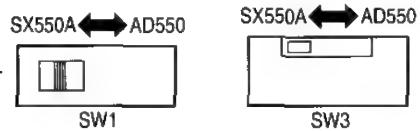


■ Extension Board Switch Setting

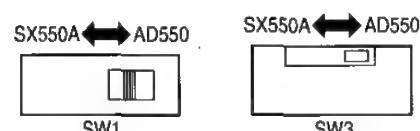


1. Set switches (SW1/SW3) on the board to choose the system requirement as shown below.

SX550A: Select this position if the board is installed in the WJ-SX550A Matrix Switcher.



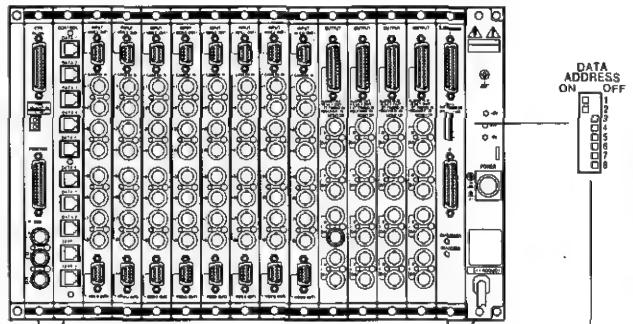
AD550: Select this position if the board is installed in the WJ-AD550 Extension Unit.



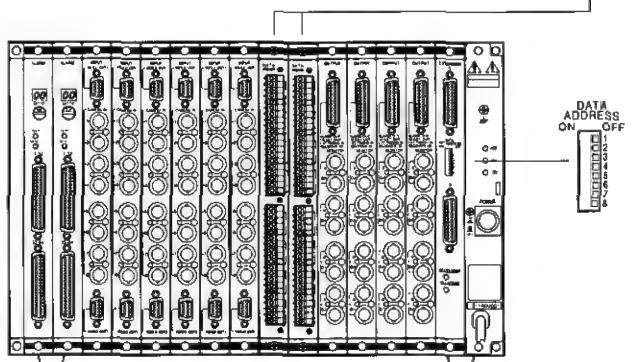
Initially, AD550 positions are selected at the factory.

2. Set the Data Unit Address Switch on the board to meet the WV-PB5548 Data Boards as shown below.
 - 1) The board installed in the WJ-SX550A
 - Set the switches to the "ON" positions to meet the identification number of the Data Boards where installed in the WJ-AD550 Extension Unit.
 - 2) The board installed in the WJ-AD550
 - Always keep these switches in the "OFF" positions in the field.

WJ-SX550A Matrix Switcher



WJ-AD550 Extension Unit



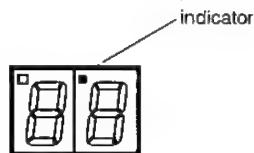
Initially, "OFF" positions are selected at the factory.

WV-PB5564 Alarm Board

1. Alarm Number display

This display indicates the alarm input number when the associated alarm sensor unit is activated.

Note: The display indicator lights up as shown below when the alarm number is over one hundred.



2. Mode Selection Switch (MODE)

This rotary switch, in combination with the test switch, is used to select the alarm test mode.

Mode 0: Press the Test Switch to receive, from memory, a chronologically organized display (in the Alarm Number Display) of all alarms received from the Alarm Input Connector.

Mode 1: Press the Test Switch to simulate receiving alarm inputs 1-64 in ascending order, one alarm per second. Use this mode to test the system for Alarm Mode-1, Mode-2 or Mode-3 set up.

Mode 2: Press the Test Switch to simulate receiving alarm inputs 1-64 all at the same time. Use this mode to test the system for Alarm Mode-1, Mode-2 or Mode-3 set up.

Mode 3-9: These modes are not available.

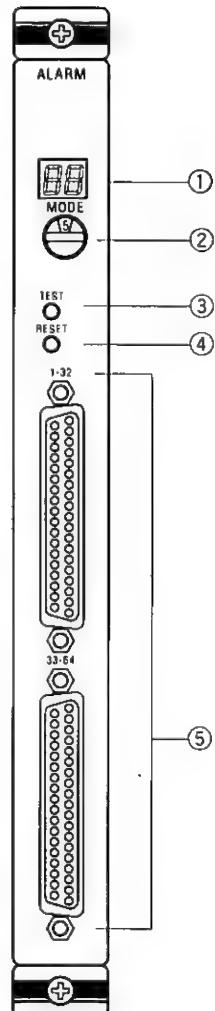
Note: The alarm inputs 65-128 are activated above modes if the SW1 on the board is set at alarm number 65-128. Refer to the Dip Switch Setting on page 42.

3. Test Switch (TEST)

This switch is used to run the alarm test mode in combination with the Mode Selection Switch.

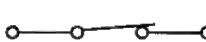
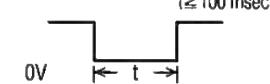
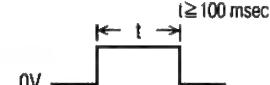
4. Reset Switch (RESET)

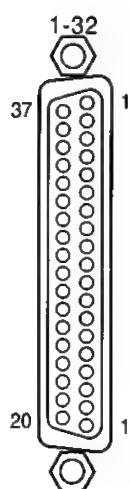
This switch is used to stop the alarm test mode or clear alarm the records from the internal memory.



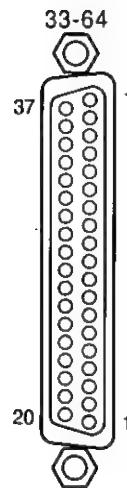
5. Alarm Input Connector (1-32, 33-64)

This connector accepts the alarm signals, either normally open or normally closed, from the associated alarm sensor unit.

	Normal Condition	Alarm In	Alarm Signal
Normally Open (NOR OPEN)	(Open) Alarm Sensor 	(Close) Alarm Sensor 	
Normally Closed (NOR CLOSE)	(Close) Alarm Sensor 	(Open) Alarm Sensor 	



Pin No.	Designation		Pin No.	Designation	
	Board No.1	Board No.2		Board No.1	Board No.2
1	Alarm 1	Alarm 65	20	Alarm 20	Alarm 84
2	Alarm 2	Alarm 66	21	Alarm 21	Alarm 85
3	Alarm 3	Alarm 67	22	Alarm 22	Alarm 86
4	Alarm 4	Alarm 68	23	Alarm 23	Alarm 87
5	Alarm 5	Alarm 69	24	Alarm 24	Alarm 88
6	Alarm 6	Alarm 70	25	Alarm 25	Alarm 89
7	Alarm 7	Alarm 71	26	Alarm 26	Alarm 90
8	Alarm 8	Alarm 72	27	Alarm 27	Alarm 91
9	Alarm 9	Alarm 73	28	Alarm 28	Alarm 92
10	Alarm 10	Alarm 74	29	Alarm 29	Alarm 93
11	Alarm 11	Alarm 75	30	Alarm 30	Alarm 94
12	Alarm 12	Alarm 76	31	Alarm 31	Alarm 95
13	Alarm 13	Alarm 77	32	Alarm 32	Alarm 96
14	Alarm 14	Alarm 78	33	Not used	Not used
15	Alarm 15	Alarm 79	34	Not used	Not used
16	Alarm 16	Alarm 80	35	Not used	Not used
17	Alarm 17	Alarm 81	36	Ground	Ground
18	Alarm 18	Alarm 82	37	Ground	Ground
19	Alarm 19	Alarm 83			

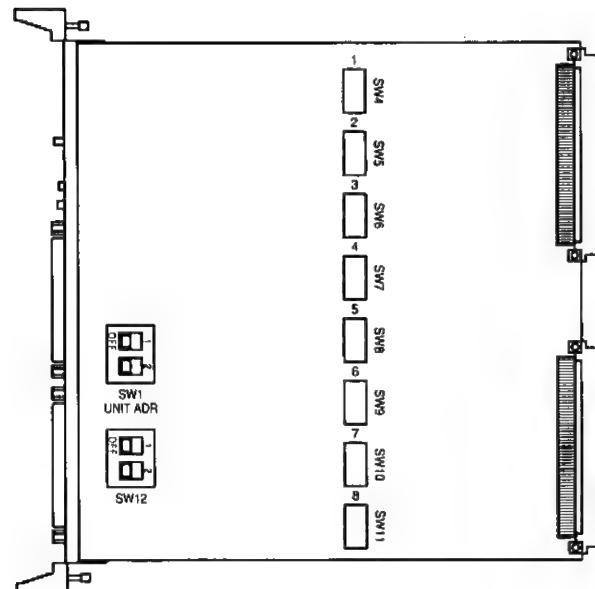


Pin No.	Designation		Pin No.	Designation	
	Board No.1	Board No.2		Board No.1	Board No.2
1	Alarm 33	Alarm 97	20	Alarm 52	Alarm 116
2	Alarm 34	Alarm 98	21	Alarm 53	Alarm 117
3	Alarm 35	Alarm 99	22	Alarm 54	Alarm 118
4	Alarm 36	Alarm 100	23	Alarm 55	Alarm 119
5	Alarm 37	Alarm 101	24	Alarm 56	Alarm 120
6	Alarm 38	Alarm 102	25	Alarm 57	Alarm 121
7	Alarm 39	Alarm 103	26	Alarm 58	Alarm 122
8	Alarm 40	Alarm 104	27	Alarm 59	Alarm 123
9	Alarm 41	Alarm 105	28	Alarm 60	Alarm 124
10	Alarm 42	Alarm 106	29	Alarm 61	Alarm 125
11	Alarm 43	Alarm 107	30	Alarm 62	Alarm 126
12	Alarm 44	Alarm 108	31	Alarm 63	Alarm 127
13	Alarm 45	Alarm 109	32	Alarm 64	Alarm 128
14	Alarm 46	Alarm 110	33	Not used	Not used
15	Alarm 47	Alarm 111	34	Not used	Not used
16	Alarm 48	Alarm 112	35	Not used	Not used
17	Alarm 49	Alarm 113	36	Ground	Ground
18	Alarm 50	Alarm 114	37	Ground	Ground
19	Alarm 51	Alarm 115			

■ WV-PB5564 Alarm Board Dip Switch Setting

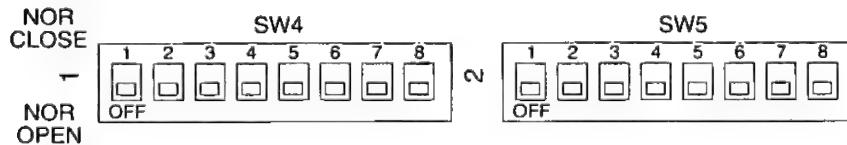
1. Set switches (SW1) on the board to meet the alarm input number as shown below.

BOARD NO.	ALARM INPUT NO.	SW1 SETTING
1	1-64	
2	65-128	



2. Set switches (SW4 - SW11) on the board to meet the alarm input requirements. Initially, normally open (NOR, OPEN) positions are selected at the factory.

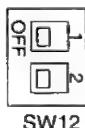
	Switch No.	Alarm Input	
		Board No.1	Board No.2
1	SW4	1 - 8	65-72
2	SW5	9 - 16	73-80
3	SW6	17 - 24	81-88
4	SW7	25 - 32	89-96
5	SW8	33 - 40	97-104
6	SW9	41 - 48	105-112
7	SW10	49 - 56	113-120
8	SW11	57 - 64	121-128



3. Confirm switchers (SW12) on the board are set to the following positions.

Note

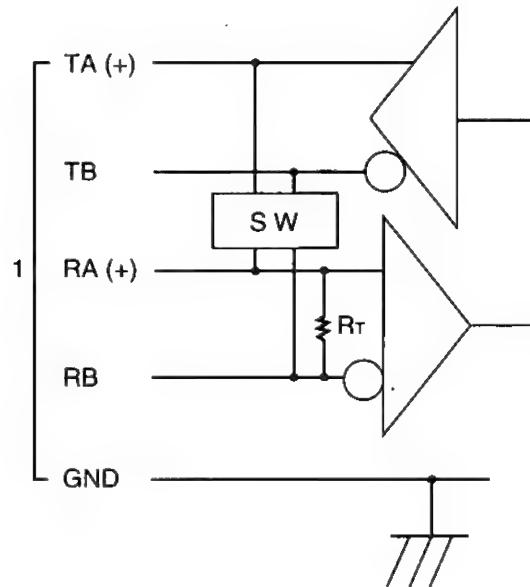
These switches are used only for factory test.
Always keep these switches in the "OFF" positions in the field.



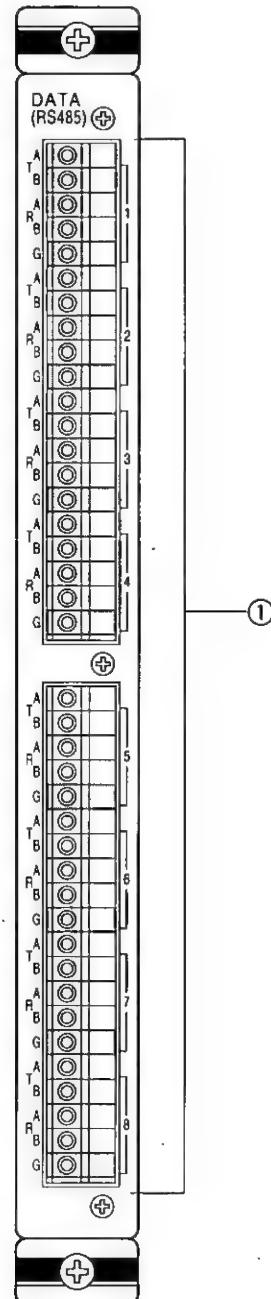
WV-PB5548 Data Board

1. Data Connector (TA/TB/RA/RB/GND, 1 - 8)

These connectors are used to transmit/receive control data to/from the camera site. Use data grade cable, suitable for RS-485 (shielded, twisted pairs). Cable length may be extended up to 1,200 m (4,000 ft).



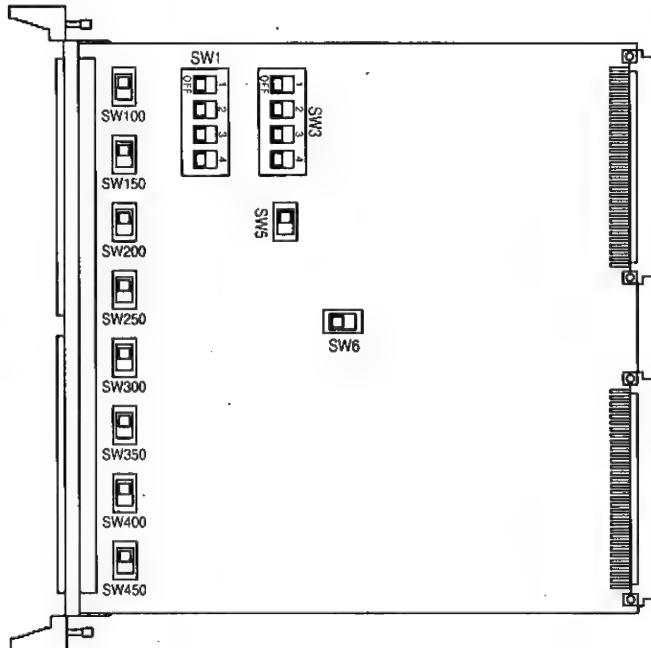
R_t: Termination Resistor, 150Ω 1/2W
SW: Selection Switch, Full Duplex/ Half Duplex
GND: Ground; Connected to each channel and common ground.



■ WV-PB5548 Data Board Dip Switch Setting

- Set switches (SW1) on the board to meet the data board number as shown in the following table.

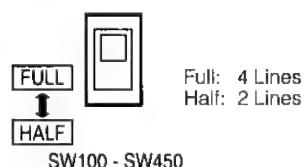
Initially, board number 1 is selected at the factory.



BOARD NO.	SW1 SETTING												
1	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td colspan="4">OFF</td></tr> </table>	1	2	3	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OFF			
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OFF													
2	<table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td colspan="4">OFF</td></tr> </table>	1	2	3	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OFF			
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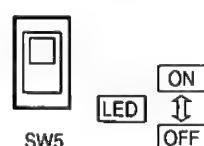
- Set switches (SW100/SW150/SW200/SW250/SW300/SW350/SW400/SW450) on the board to choose the communication lines as either Full Duplex (FULL) or Half Duplex (HALF).

Initially, Full Duplex(FULL) positions are selected at the factory.



- Set switch (SW5) on the board to choose the LED indicator as either "ON" or "OFF" mode. The indicator displays that the control data are activated normally on the board.

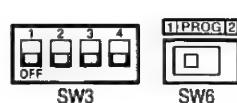
Initially, "ON" position is selected at the factory.



- Confirm switches (SW3/SW6) on the board are set to the following positions.

Note

These switches are used only for factory test.
Always keep these switches in these positions in the field.



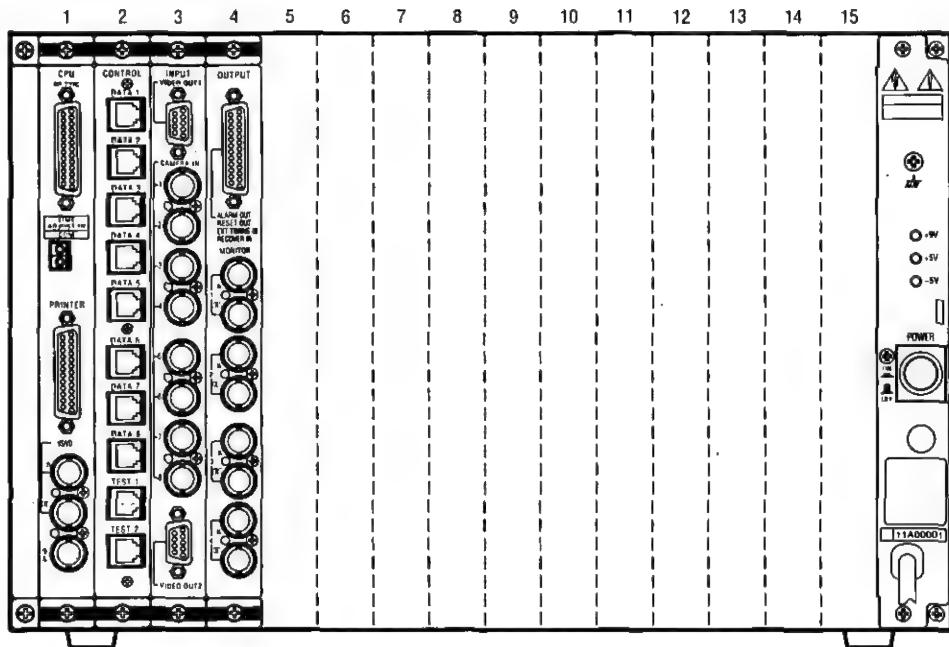
BOARD SELECTION FOR SYSTEM EXPANSION

This switcher has 15 slots, 4 of which are available for system expansion.

The CPU and Control Board, along with one Video Input Board and one Video Output Board are supplied as standard accessories.

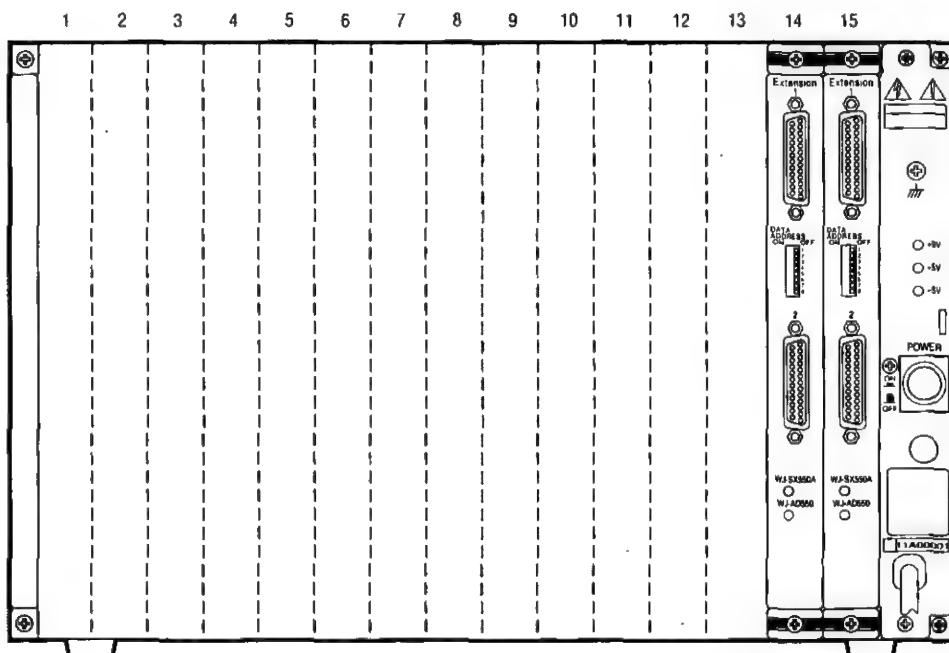
Depending on the number of camera inputs and monitor outputs required, additional WV-PB5508 Video Input Boards, WV-PB5504A Video Output Boards will be required.

- **WJ-SX550A Matrix Switcher**



Also the extension unit has 15 slots and two Extension Boards are installed in this unit.

- **WJ-AD550 Extension Unit**



The following table shows components required for various system configurations.

Cameras	Monitors	Extension Unit WJ-AD550	Input Boards WV-PB5508	Output Boards WV-PB5504A	Slots Used	Slots Left
1 - 8	1 - 4	not required	1	1	4	11
9 - 16	1 - 4	not required	2	1	5	10
17 - 24	1 - 4	not required	3	1	6	9
25 - 32	1 - 4	not required	4	1	7	8
33 - 40	1 - 4	not required	5	1	8	7
41 - 48	1 - 4	not required	6	1	9	6
49 - 56	1 - 4	not required	7	1	10	5
57 - 64	1 - 4	not required	8	1	11	4
65 - 72	1 - 4	required	9	2	15	15
73 - 80	1 - 4	required	10	2	16	14
81 - 88	1 - 4	required	11	2	17	13
89 - 96	1 - 4	required	12	2	18	12
97 - 104	1 - 4	required	13	2	19	11
105 - 112	1 - 4	required	14	2	20	10
113 - 120	1 - 4	required	15	2	21	9
121 - 128	1 - 4	required	16	2	22	8

Cameras	Monitors	Extension Unit WJ-AD550	Input Boards WV-PB5508	Output Boards WV-PB5504A	Slots Used	Slots Left
1 - 8	5 - 8	not required	1	2	5	10
9 - 16	5 - 8	not required	2	2	6	9
17 - 24	5 - 8	not required	3	2	7	8
25 - 32	5 - 8	not required	4	2	8	7
33 - 40	5 - 8	not required	5	2	9	6
41 - 48	5 - 8	not required	6	2	10	5
49 - 56	5 - 8	not required	7	2	11	4
57 - 64	5 - 8	not required	8	2	12	3
65 - 72	5 - 8	required	9	4	17	13
73 - 80	5 - 8	required	10	4	18	12
81 - 88	5 - 8	required	11	4	19	11
89 - 96	5 - 8	required	12	4	20	10
97 - 104	5 - 8	required	13	4	21	9
105 - 112	5 - 8	required	14	4	22	8
113 - 120	5 - 8	required	15	4	23	7
121 - 128	5 - 8	required	16	4	24	6

Cameras	Monitors	Extension Unit WJ-AD550	Input Boards WV-PB5508	Output Boards WV-PB5504A	Slots Used	Slots Left
1 - 8	9 - 12	not required	1	3	6	9
9 - 16	9 - 12	not required	2	3	7	8
17 - 24	9 - 12	not required	3	3	8	7
25 - 32	9 - 12	not required	4	3	9	6
33 - 40	9 - 12	not required	5	3	10	5
41 - 48	9 - 12	not required	6	3	11	4
49 - 56	9 - 12	not required	7	3	12	3
57 - 64	9 - 12	not required	8	3	13	2
65 - 72	9 - 12	required	9	6	19	11
73 - 80	9 - 12	required	10	6	20	10
81 - 88	9 - 12	required	11	6	21	9
89 - 96	9 - 12	required	12	6	22	8
97 - 104	9 - 12	required	13	6	23	7
105 - 112	9 - 12	required	14	6	24	6
113 - 120	9 - 12	required	15	6	25	5
121 - 128	9 - 12	required	16	6	26	4

Cameras	Monitors	Extension Unit WJ-AD550	Input Boards WV-PB5508	Output Boards WV-PB5504A	Slots Used	Slots Left
1 - 8	9 - 12	not required	1	4	7	8
9 - 16	9 - 12	not required	2	4	8	7
17 - 24	9 - 12	not required	3	4	9	6
25 - 32	9 - 12	not required	4	4	10	5
33 - 40	9 - 12	not required	5	4	11	4
41 - 48	9 - 12	not required	6	4	12	3
49 - 56	9 - 12	not required	7	4	13	2
57 - 64	9 - 12	not required	8	4	14	1
65 - 72	9 - 12	required	9	8	21	9
73 - 80	9 - 12	required	10	8	22	8
81 - 88	9 - 12	required	11	8	23	7
89 - 96	9 - 12	required	12	8	24	6
97 - 104	9 - 12	required	13	8	25	5
105 - 112	9 - 12	required	14	8	26	4
113 - 120	9 - 12	required	15	8	27	3
121 - 128	9 - 12	required	16	8	28	2

Notes:

- The two extension boards should be installed in the slots when the extension unit is required.
- It will be installed up to two (2) Alarm Boards or eight (8) Data Boards in the slots left.

INSTALLATION AND SYSTEM CONNECTIONS

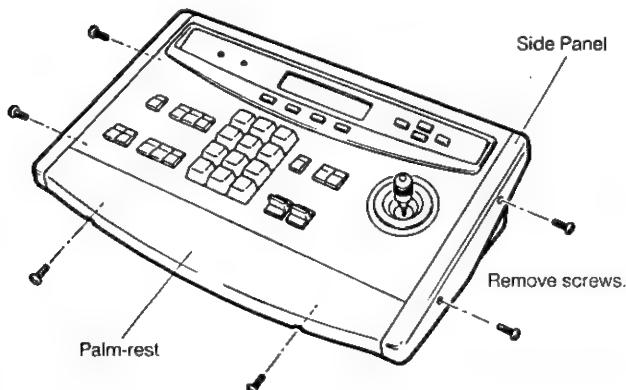
INSTALLATION

The installation described below should be made by qualified service personnel or system installers.

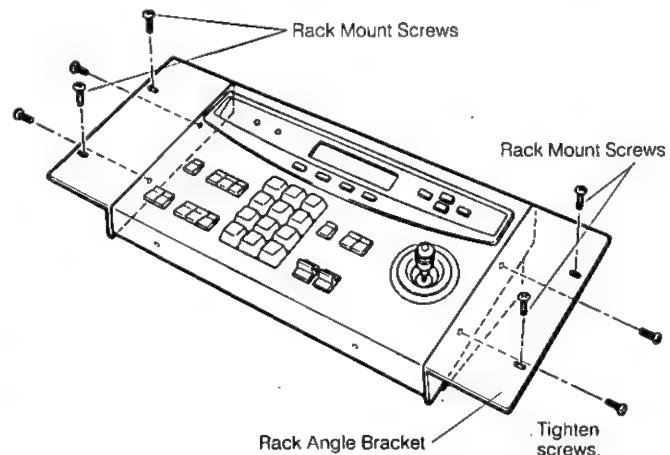
■ WV-CU550A System Controller

Replacing the Side Panels with the optional WV-Q62 Rack Angle Bracket

1. Remove both the left and right side panels of the System Controller by removing four screws.



2. Remove the Palm-rest located on the front of the System Controller by removing two screws.
3. Place the Rack Angle Brackets on both sides of the System Controller and tighten with the four supplied screws.
4. Install the System Controller with Rack Angle Brackets in the rack by using four screws (procured locally).



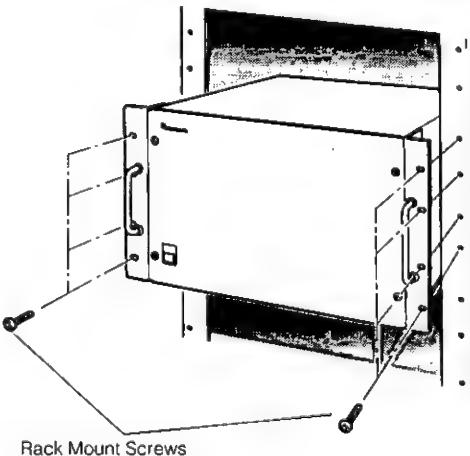
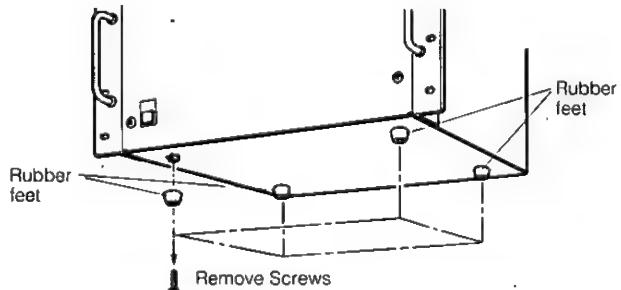
■ WJ-SX550A Matrix Switcher

Mounting into the Rack

1. Remove four rubber feet by removing four screws on the bottom of the Matrix Switcher.
2. Install the Matrix Switcher in the rack by using eight screws (procured locally).

Note:

The cooling fans inside the Matrix Switcher are article of consumption, and need to replace periodically.



Caution

- Do not block the ventilation opening or slots on the cover to prevent the unit from rising temperature. Always keep the temperature in the rack within 50°C (122°F)
- Secure the rear of the unit to the rack by using the additional mounting angles (procured locally) when the vibration is added to the rack.

■ Installing Additional Boards for Expansion

- **Extension Unit is not required.**

Caution

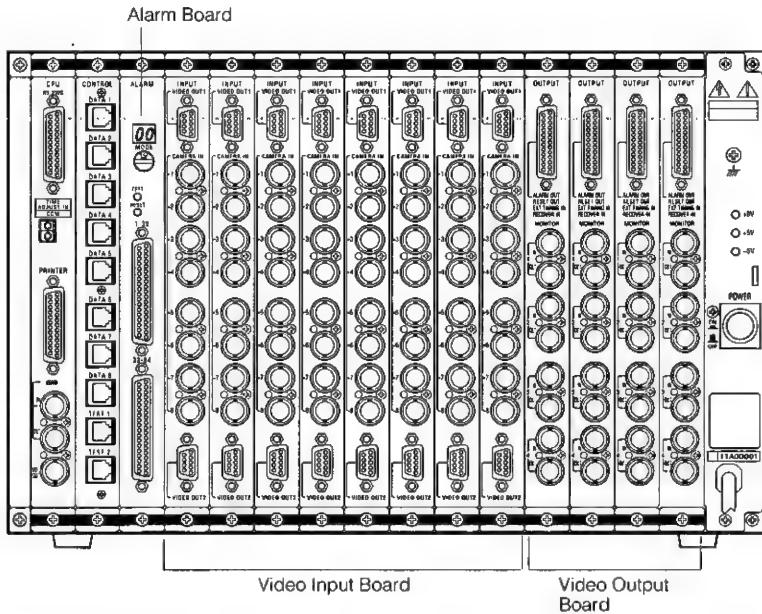
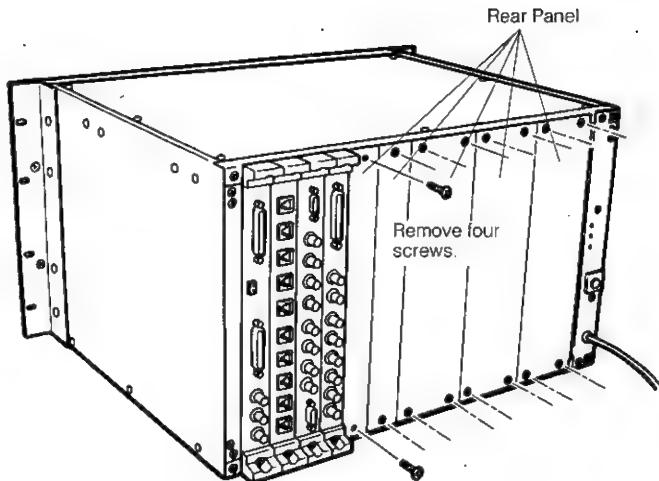
Before installing any boards be sure to turn off the Power Switch of the WJ-SX550A Matrix Switcher.

1. Remove the screws from the rear panel(s) of the Matrix Switcher.
2. Remove the rear panel(s).
3. Place the Board into the desired position in the rear of Matrix Switcher by sliding it inside the board guides.

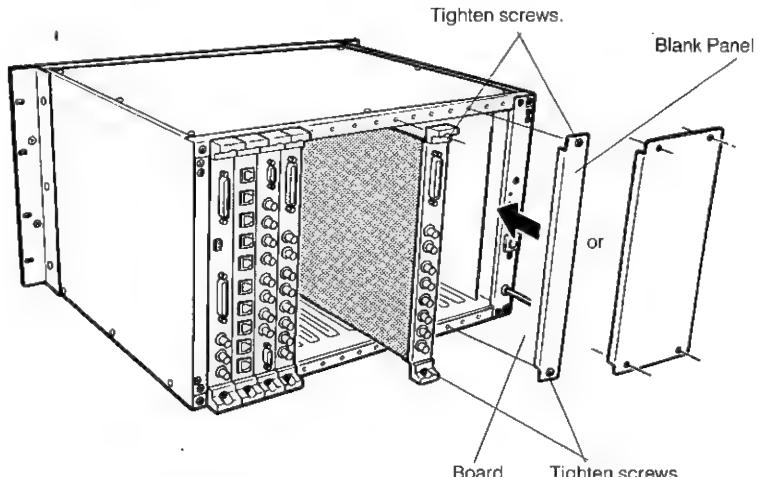
Note

Each slot is identical, so the board can be installed in any slot.

However it is recommended to install the boards as shown below for an orderly installation.



4. Make sure to push in the Board until it is seated firmly.
5. Secure the Board by tightening the two screws on the board.
6. Close off open spaces on the rear of the Matrix Switcher by using WV-Q63 Blank Panels (Optional) or supplied rear panel(s).



• Extension Unit is required

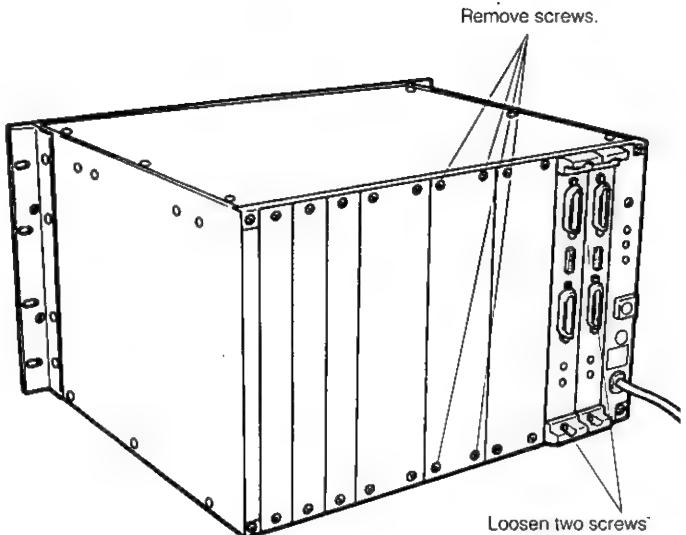
Caution

Before installing any boards, be sure to turn off the Power Switch of the WJ-SX550A Matrix Switcher and WJ-AD550 Extension Unit.

When the Extension Unit is required to install the boards, it is recommended to install the boards as shown below.

Removing Extension Boards

1. Remove the screws from rear panel(s) of the Extension Unit.
2. Remove the rear panel(s).
3. Loosen the two screws on the Extension Board(s).
4. Pull out the Extension Board(s) from the rear of Extension Unit by sliding it inside the board guides.



4

Installing Boards

1. Install a Extension Board to the slot number 15 of the Matrix Switcher and Extension Unit.

Note: Before installing the boards, be sure to set the dip switches to the required positions.

2. Install the Video Input Boards as shown below.

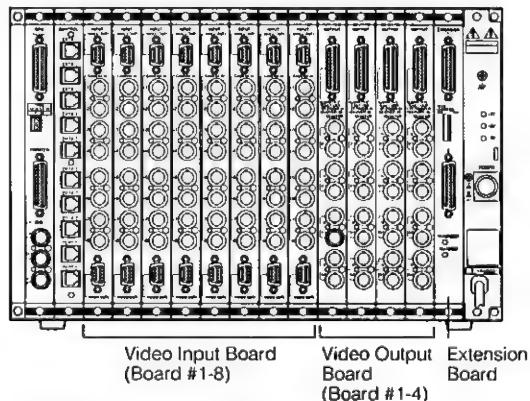
Board Number 1 - 8 are into the Matrix Switcher
Board Number 9 - 16 are into the Extension Unit.

3. Install the Video Output Boards as shown below.

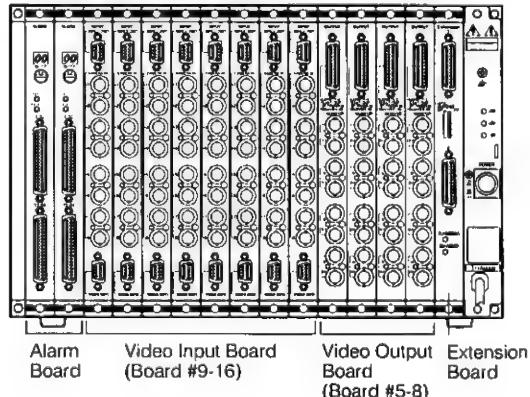
Board Number 1 - 4 are into the Matrix Switcher.
Board Number 5 - 8 are into the Extension Unit.

Note: Up to two Alarm Boards or eight Data Boards can be installed in the Matrix Switcher and Extension Unit. When the Data Boards are installed in the Extension Unit, be sure to set the Data Unit Address Switch on the Extension Boards.

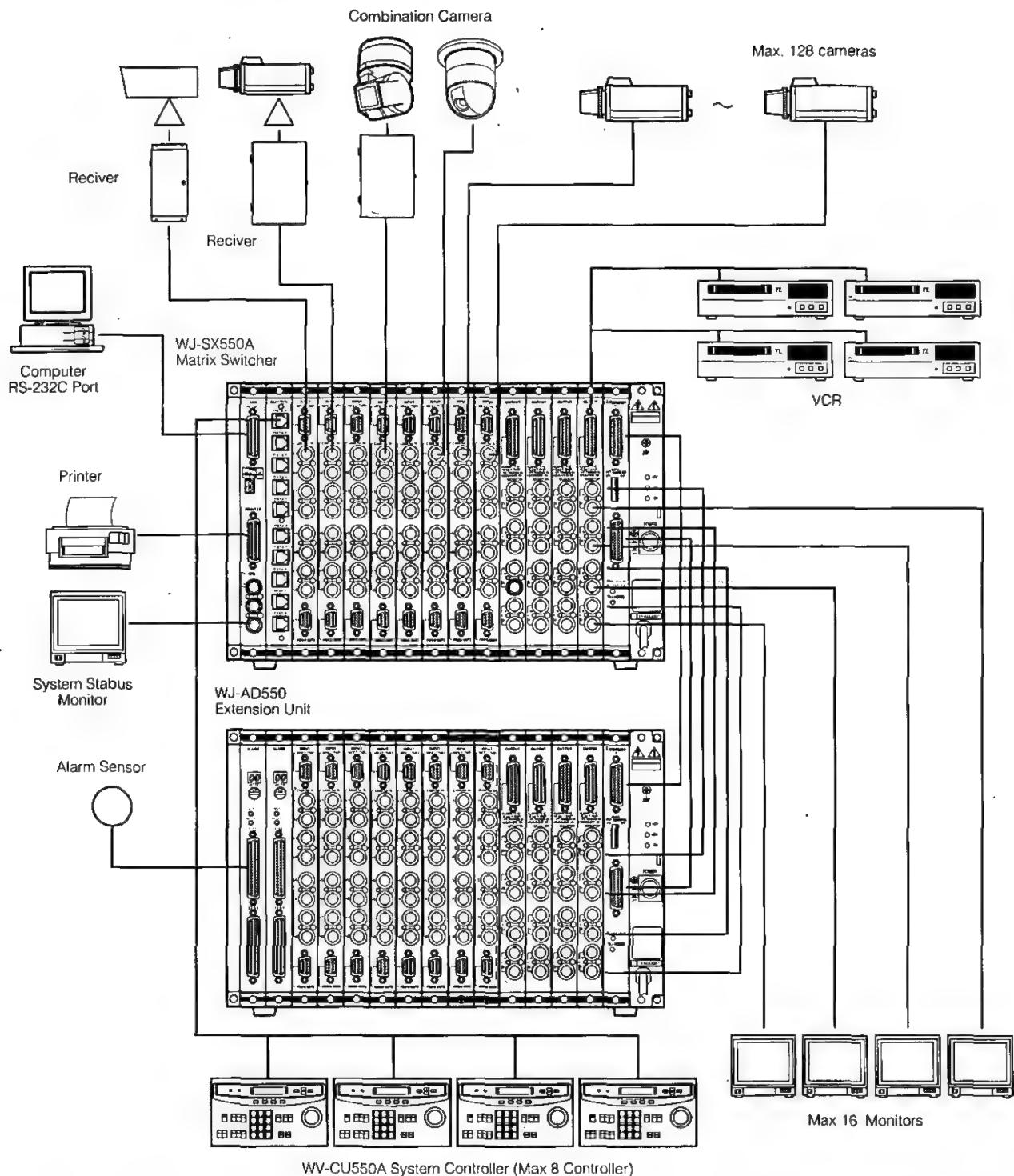
WJ-SX550A Matrix Switcher



WJ-AD550 Extension Unit



SYSTEM CONNECTIONS



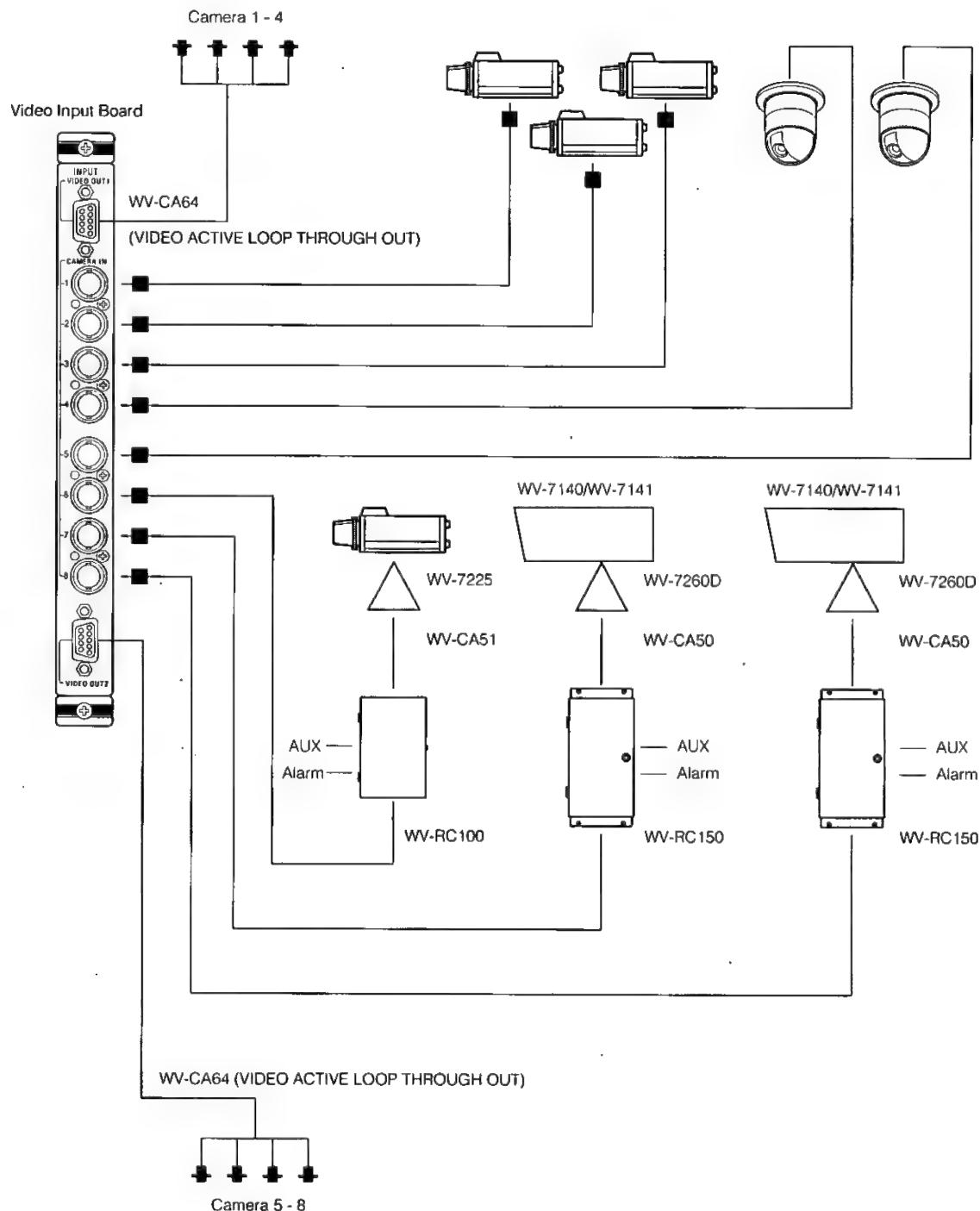
Note : Refer to the Operating Instruction of WJ-AD550 Extension Unit for connections when the WJ-AD550 Extension Unit is used.

Over View of System Connection

■ Connection with the Camera Sites

Connect the Camera Site Equipments to the Camera Input Connectors (CAMERA IN, 1-8) on the Video Input Board.

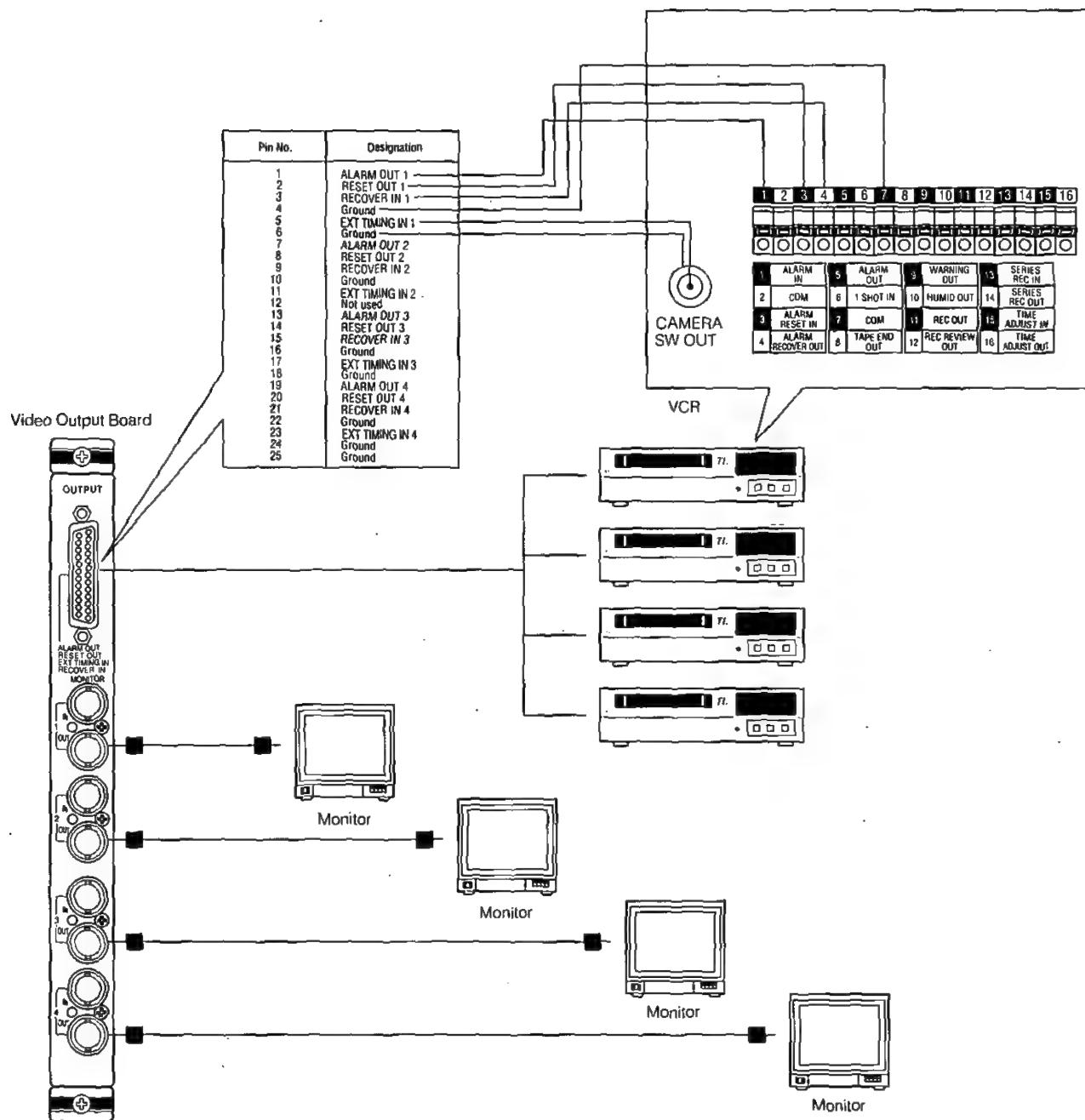
Caution: Make sure that the cable length between the camera site and the WJ-SX550A Matrix Switcher is less than 900m (3,000 ft) when using RG-59U, BELDEN 9259 or equivalent cable.



Connection with the Camera Sites

■ Connection with the Monitors

Connect the Monitors to the Monitor Output Connectors (MONITOR OUT) on the Video Output Board(s).



Connection with the Monitors

■ Connection with the System Controllers

• Data Line and Unit Number Setting

Up to eight WV-CU550A System Controllers may be installed in a Matrix System.

The Control Board installed in the WJ-SX550A Matrix Switcher has eight ports that correspond to eight WV-CU550A System Controller inputs.

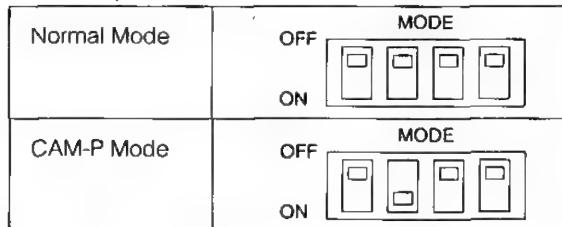
If the supplied 6-conductor cable assembly is used, simply plug one end of the cable into a port on the Control Board and other end into one of the ports on the rear of the System Controller.

• Mode Selection Switch Setting

The Mode Selection Switch, that selects the operation mode of the System Controller, is located on the rear of the System Controller. Select the switches to meet the system shown below.

If the cable to be used is assembled from locally procured materials it is important that only high quality, data grade cable, suitable for RS-485 (2 shield, twisted pairs) is used.

Low grade cable will result in unstable operation of the system.



Normal Mode: Selects the menus except the CAM-P (D5) Menu on the LCD.

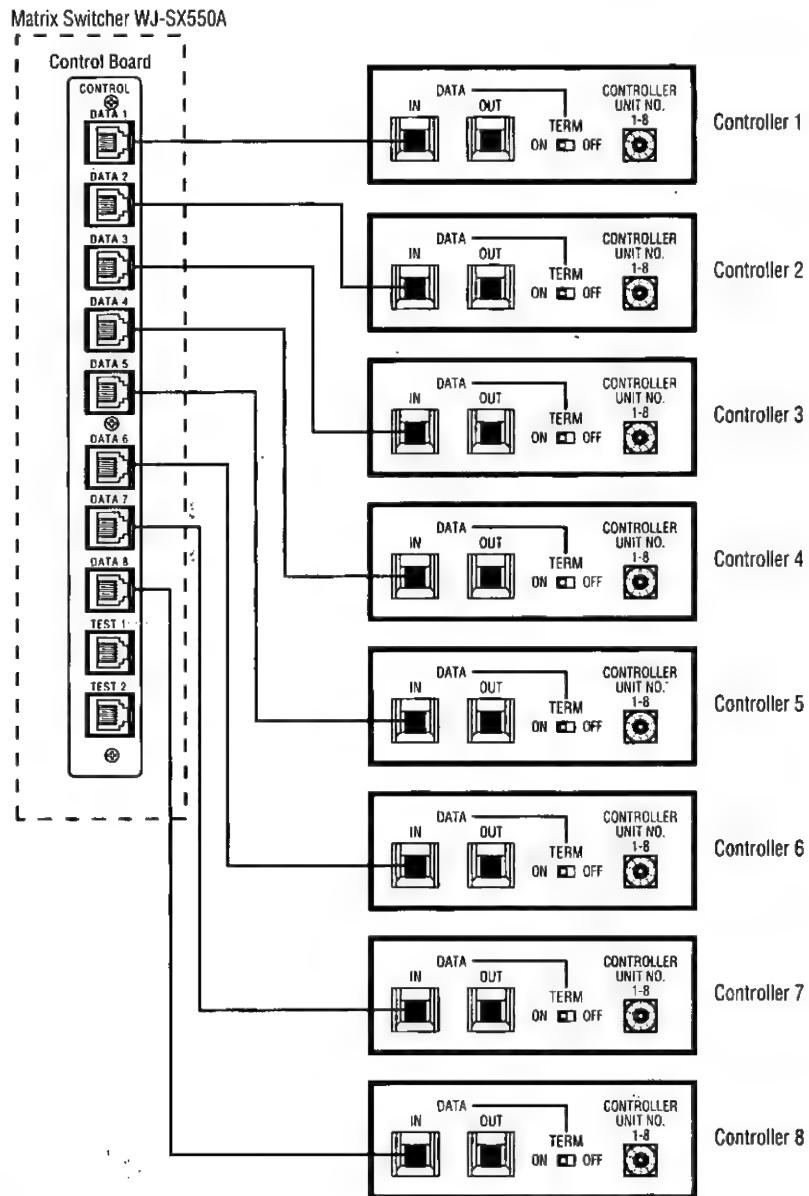
CAM-P Mode: Selects the CAM-P (D5) Menu on the LCD included menus at the Normal Mode. Select this mode if operating the Camera Position functions.

Select the mode before turning the System Controller power on.

The selected mode is fixed to turn the System Controller power on. Initially, Normal Mode is selected at the factory.

• **Direct connection between the Control Board and System Controllers ("Home Run" Type Wiring)**

In this type of installation there is one control cable directly connecting each System Controller to one Control Board port. Refer to the connections and controller settings shown below.



Home Run Connections

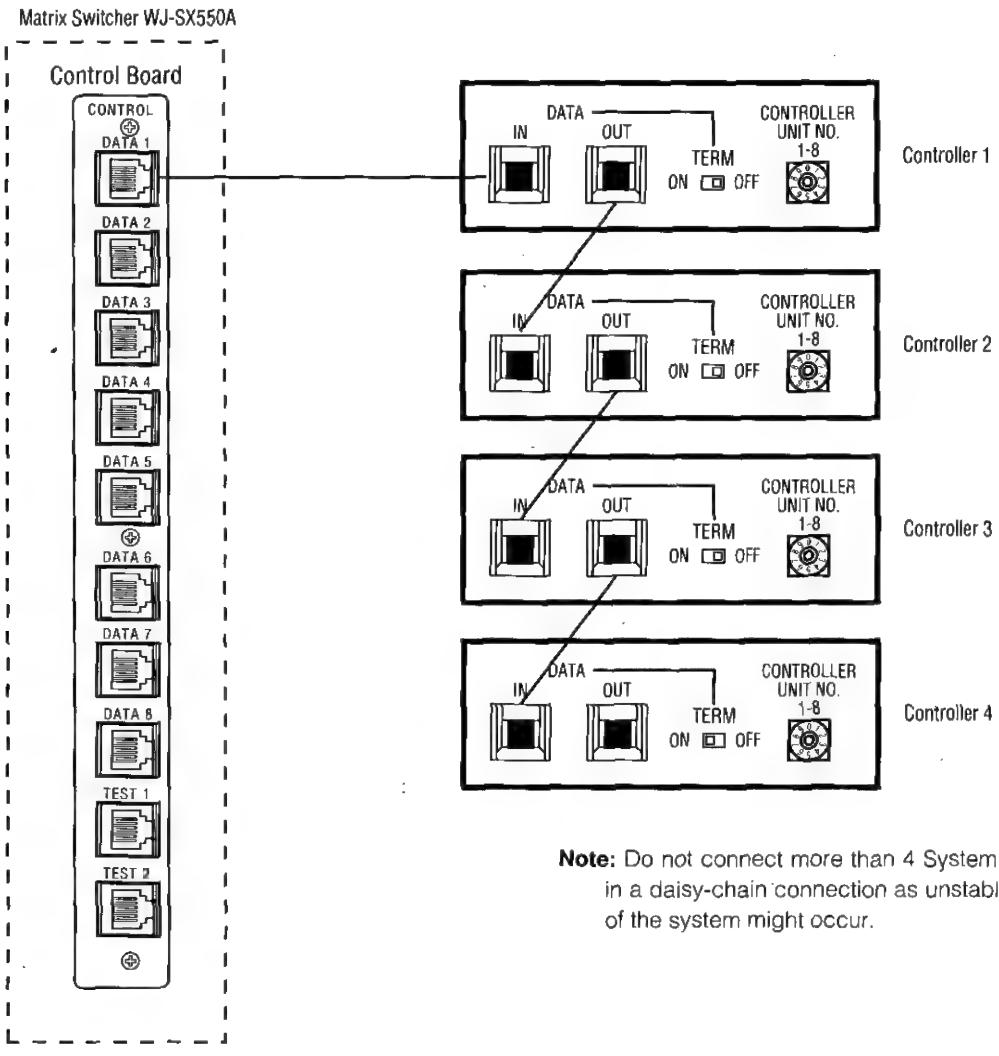
Termination and Controller Unit Number Setting

	Termination Switch	Controller Unit Number
Controller 1	ON	Any Number 1-8
Controller 2	ON	Any Number 1-8
Controller 3	ON	Any Number 1-8
Controller 4	ON	Any Number 1-8
Controller 5	ON	Any Number 1-8
Controller 6	ON	Any Number 1-8
Controller 7	ON	Any Number 1-8
Controller 8	ON	Any Number 1-8

Note: Do not use the "0" or "9" controller unit numbers.

• **Indirect connection between the Control Board and System Controllers ("Daisy-Chain" Type Wiring)**

In this type of installation only one control cable directly connects between System Controller #1 and the Control Board. The rest of the System Controllers connect to System Controller #1 in a Daisy-Chain type of connection. Refer to the connections and controller settings shown below.



Note: Any data port can be used.

Note: Do not connect more than 4 System Controllers in a daisy-chain connection as unstable operation of the system might occur.

Daisy-Chain Connections

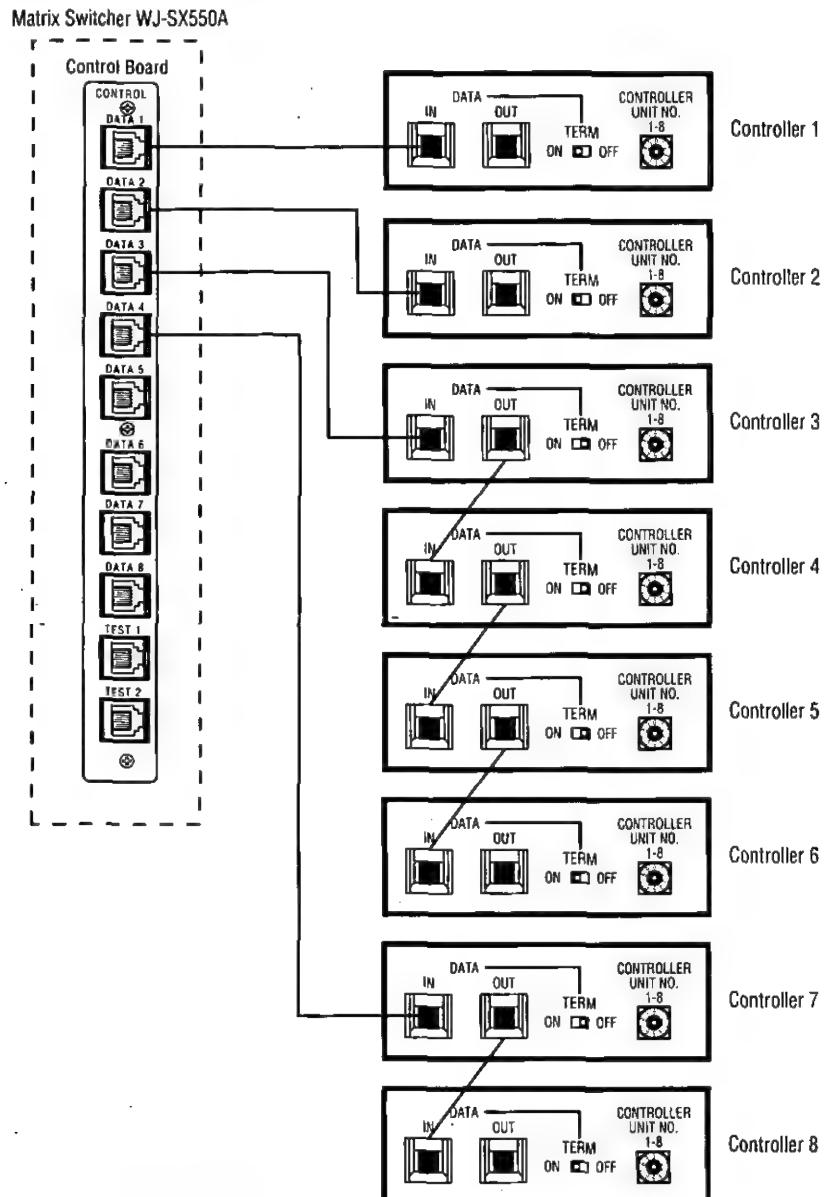
Termination and Controller Unit Number Setting

	Termination Switch	Controller Unit Number
Controller 1	OFF	1
Controller 2	OFF	2
Controller 3	OFF	3
Controller 4	ON	4

Note: Do not use the "0" or "9" controller unit numbers.

- Combination of direct and indirect connections between the Control Board and System Controllers (Both "Home Run" and "Daisy-Chain" wiring in one system)

In this type of installation there is a mixture of wiring methods, with some System Controllers connecting directly to the Control Board while other System Controllers connect to the Control Board through other System Controllers. Refer to the connections and controller settings shown below.



Termination and Controller Unit Number Setting

Combination Connections

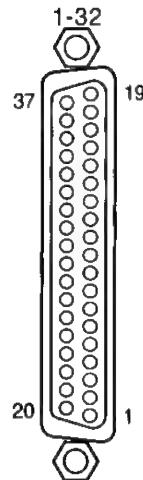
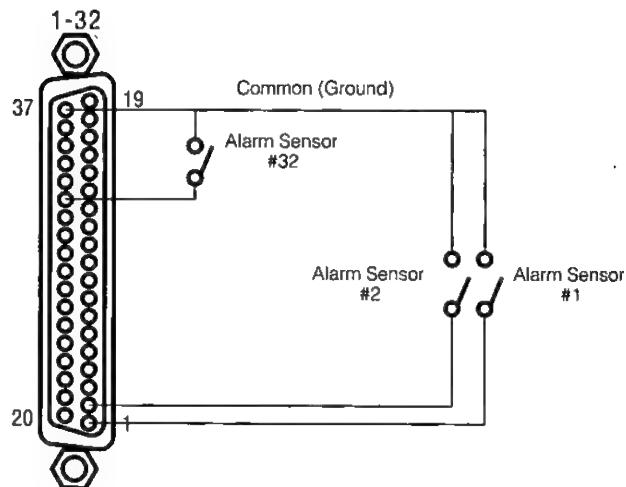
Notes:

- Do not use the "0" or "9" controller unit numbers.
- Controller number on the status monitor is determined by the Control Board port number.

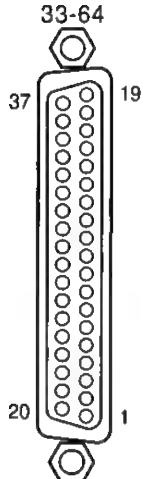
	Termination Switch	Controller Unit Number	Controller Number on Status Monitor
Controller 1	ON	Any Number 1-8	1
Controller 2	ON	Any Number 1-8	2
Controller 3	OFF	1	3
Controller 4	OFF	2	3
Controller 5	OFF	3	3
Controller 6	ON	4	3
Controller 7	OFF	1	4
Controller 8	ON	2	4

■ Connection with the Alarm Sensor Units

Connect the sensor switches to the Alarm Input Connector on the Alarm Board as shown in the example below.



Pin No.	Designation		Pin No.	Designation	
	Board No.1	Board No.2		Board No.1	Board No.2
1	Alarm 1	Alarm 65	20	Alarm 20	Alarm 84
2	Alarm 2	Alarm 66	21	Alarm 21	Alarm 85
3	Alarm 3	Alarm 67	22	Alarm 22	Alarm 86
4	Alarm 4	Alarm 68	23	Alarm 23	Alarm 87
5	Alarm 5	Alarm 69	24	Alarm 24	Alarm 88
6	Alarm 6	Alarm 70	25	Alarm 25	Alarm 89
7	Alarm 7	Alarm 71	26	Alarm 26	Alarm 90
8	Alarm 8	Alarm 72	27	Alarm 27	Alarm 91
9	Alarm 9	Alarm 73	28	Alarm 28	Alarm 92
10	Alarm 10	Alarm 74	29	Alarm 29	Alarm 93
11	Alarm 11	Alarm 75	30	Alarm 30	Alarm 94
12	Alarm 12	Alarm 76	31	Alarm 31	Alarm 95
13	Alarm 13	Alarm 77	32	Alarm 32	Alarm 96
14	Alarm 14	Alarm 78	33	Not used	Not used
15	Alarm 15	Alarm 79	34	Not used	Not used
16	Alarm 16	Alarm 80	35	Not used	Not used
17	Alarm 17	Alarm 81	36	Ground	Ground
18	Alarm 18	Alarm 82	37	Ground	Ground
19	Alarm 19	Alarm 83			

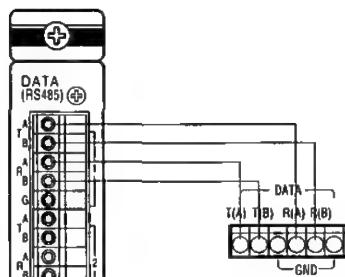


Pin No.	Designation		Pin No.	Designation	
	Board No.1	Board No.2		Board No.1	Board No.2
1	Alarm 33	Alarm 97	20	Alarm 52	Alarm 116
2	Alarm 34	Alarm 98	21	Alarm 53	Alarm 117
3	Alarm 35	Alarm 99	22	Alarm 54	Alarm 118
4	Alarm 36	Alarm 100	23	Alarm 55	Alarm 119
5	Alarm 37	Alarm 101	24	Alarm 56	Alarm 120
6	Alarm 38	Alarm 102	25	Alarm 57	Alarm 121
7	Alarm 39	Alarm 103	26	Alarm 58	Alarm 122
8	Alarm 40	Alarm 104	27	Alarm 59	Alarm 123
9	Alarm 41	Alarm 105	28	Alarm 60	Alarm 124
10	Alarm 42	Alarm 106	29	Alarm 61	Alarm 125
11	Alarm 43	Alarm 107	30	Alarm 62	Alarm 126
12	Alarm 44	Alarm 108	31	Alarm 63	Alarm 127
13	Alarm 45	Alarm 109	32	Alarm 64	Alarm 128
14	Alarm 46	Alarm 110	33	Not used	Not used
15	Alarm 47	Alarm 111	34	Not used	Not used
16	Alarm 48	Alarm 112	35	Not used	Not used
17	Alarm 49	Alarm 113	36	Ground	Ground
18	Alarm 50	Alarm 114	37	Ground	Ground
19	Alarm 51	Alarm 115			

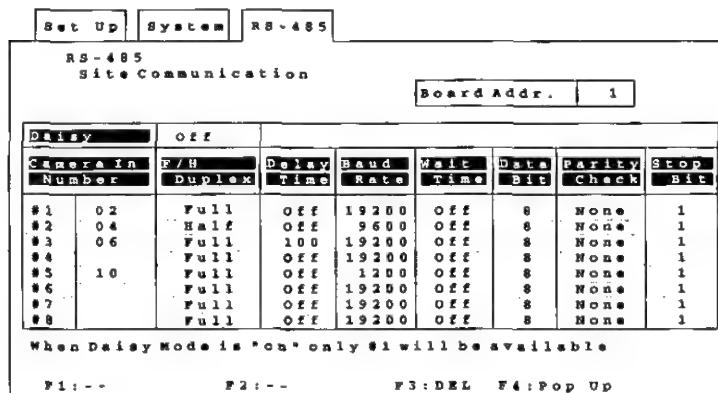
■ Connection between the Data Board and Camera Site

Connect the Data Board and the Camera Controller by specified data cable.
Basically, connect shown right.

Then the following settings should be made by using the Setup Menu.



• Matrix Switcher



• Camera Controller

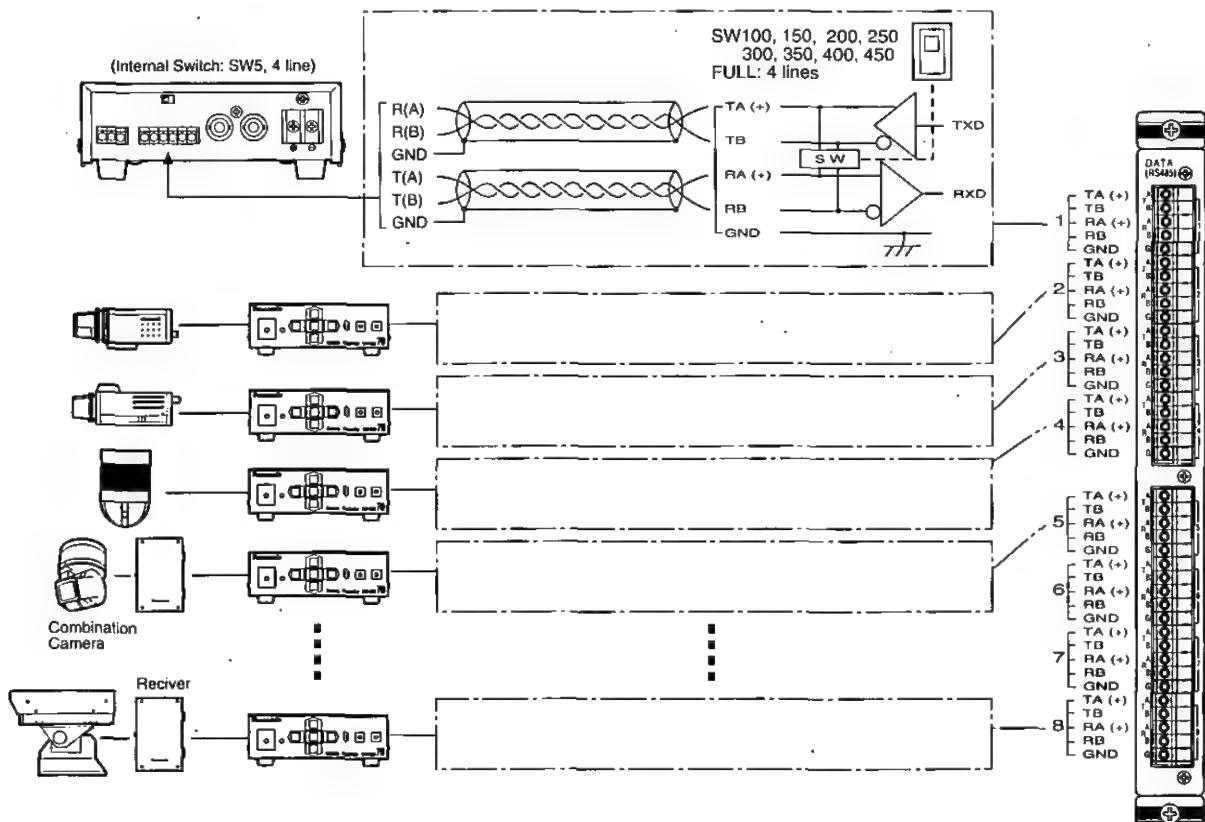
** Communication **	
Unit Number	1
Baud Rate	19200
Data Bit	8
Parity Check	None
Stop Bit	1
Xon/Xoff	Not Use
Wait Time	Off
Delay Time	Off
Alarm Data	Off
Return	

4

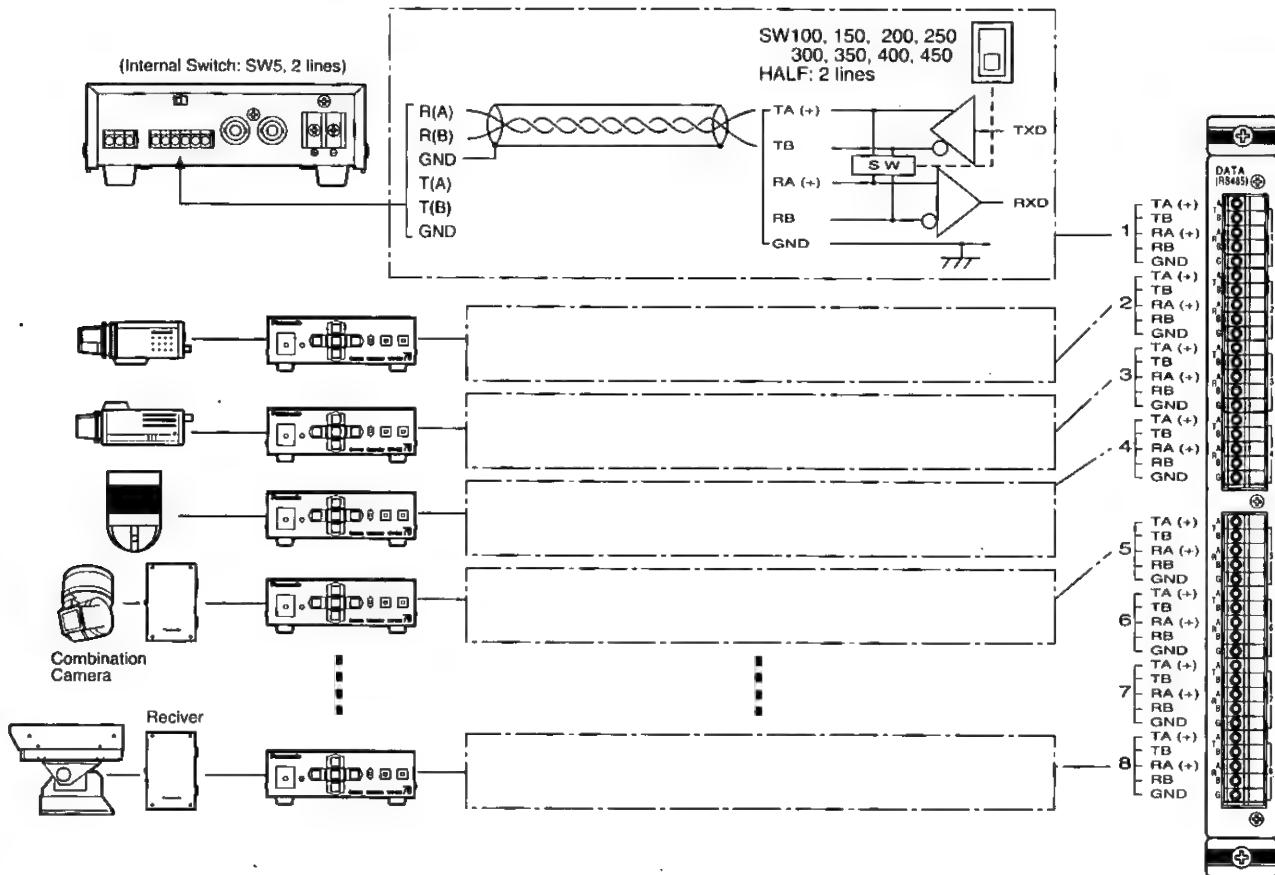
• Direct Connection between the Data Board and Camera Controllers

In this type of connection there is one control cable directly connecting each Data Connector to the WV-RM70 Camera Controller. Refer to the connections and settings shown below.

4 Line (Full Duplex) Connection



2 Line (Half Duplex) Connection



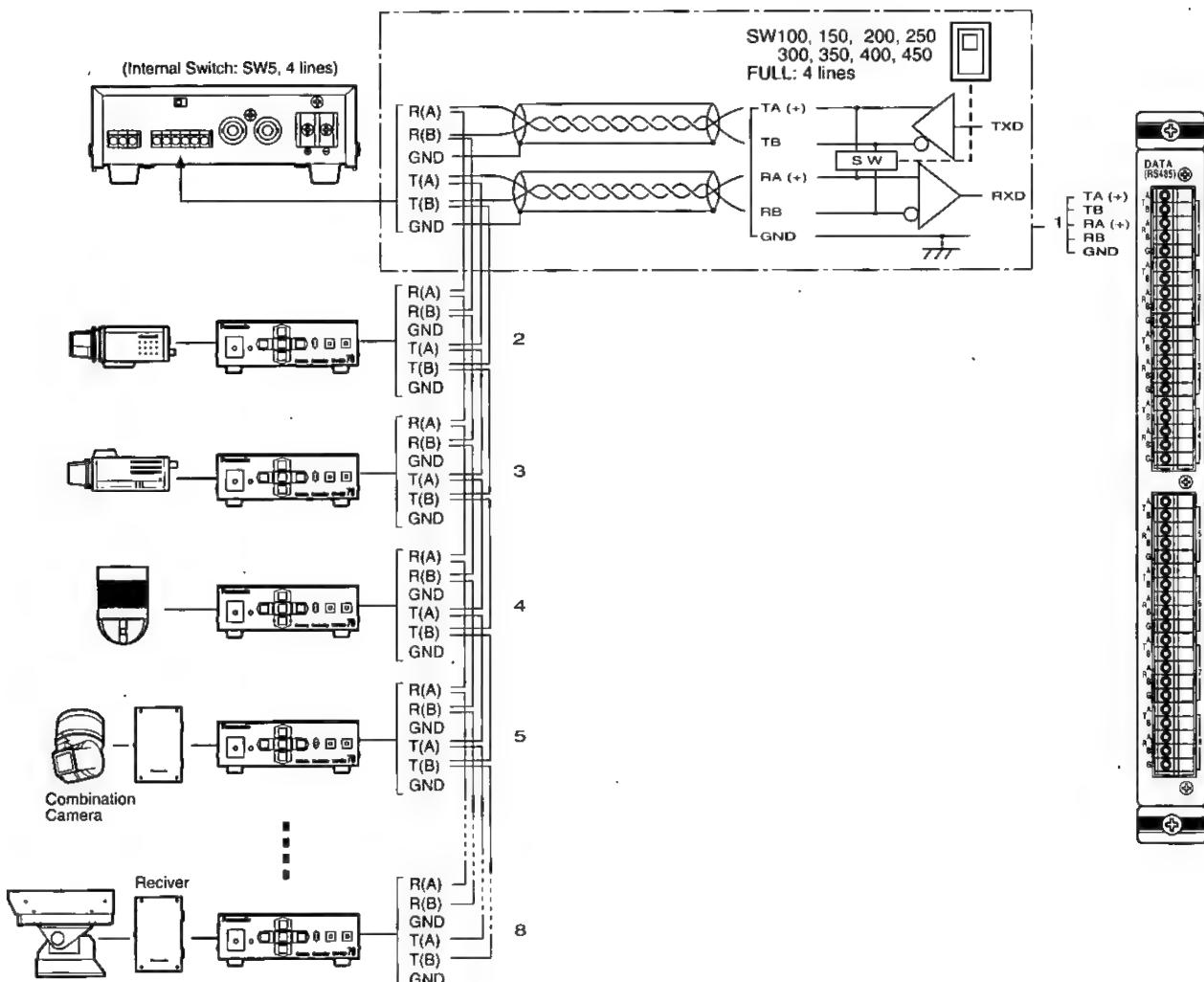
Set the same Communication Parameters on the Setup Menus of the Matrix Switcher and Camera Controller.

Parameters \ Models	Matrix Switcher WJ-SX550A	Camera Controller WV-RM70
	F/H Duplex Full or Half	
Baud Rate	19200	19200
Data Bit	8	8
Parity Check	None Fixed	None
Stop Bit	1	1
Wait time	Off	Off
Delay Time	Off	Off
		Xon/Xoff : Not use
		Alarm Data : On
	Daisy : Off	Unit Number : Not use

- Indirect Connection between the Data Board and Camera Controllers (“Daisy-Chain” Type Wiring)

In this type of connection only one control cable directly connects between the Data Connector #1 and the Camera Controller #1. The rest of the Camera Controllers connect to Camera Controller #1 in a Daisy-Chain of connection. Refer to the connections and settings shown below.

4 Line (Full Duplex) Connection



Set the Matrix Switcher and the Camera Controllers (up to 8) shown below.

Parameters	Models	Matrix Switcher WJ-SX550A	Camera Controller WV-RM70
Daisy	: On	F/H Duplex : Full Camera In Number #1 --- Camera In Number #2 --- Camera In Number #3 --- Camera In Number #4 --- Camera In Number #5 --- Camera In Number #6 --- Camera In Number #7 --- Camera In Number #8 ---	Unit Number : 1 Unit Number : 2 Unit Number : 3 Unit Number : 4 Unit Number : 5 Unit Number : 6 Unit Number : 7 Unit Number : 8

Note

It is not available 2 Line (Half Duplex) connection in a Daisy-Chain.

Caution

It is only available an alarm data connected unit in a Daisy-Chain. Set the Mode Selection Switch on the one of Camera Controllers to the "NORMAL" position and the others are set to the "ALARM OFF" positions.

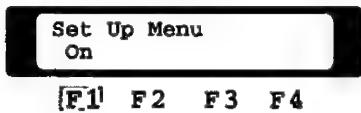
SOFTWARE SETUP

SET UP MENU

The Set Up Menu provides a way for controlling functions not available through direct keyboard input. It is accessible to system operators with the proper operator level. The Set Up Menu also provides access for system programming to authorized operators.

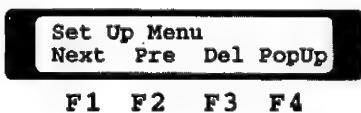
To access the Set Up Menu:

1. Log-in to system.
See page 95 for details.
2. Select the desired monitor for viewing Set Up Menu.
Refer to Monitor Selection on page 98.
3. Select the Set Up Menu (**A6**) on the LCD by pressing the Cursor Keys.



Note: The default setting is set up on. Pressing the **(F1)** Key at this point will allow access to the Set Up Programming Menu if such access is authorized by operator's level. If **PROHIBITED** appears on the LCD, press the Escape **(ESC)** Key to return the Set Up Menu display.

4. Press the Function **(F1)** Key to allow access to the Set Up Programming Menu (Set Up Menu).
The menu now appears on the selected monitor.



In the Set Up Menu, the following keys and switches are valid:

Function Keys

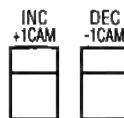
- F1: Selects the next page.
- F2: Selects the previous page.
- F3: Deletes or initializes the setting where the cursor is positioned.
- F4: Opens the Pop Up Window



Executes the setting or Selection.



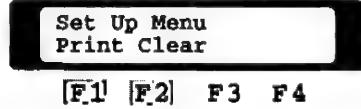
Escapes from the programming mode or menu.



Performs various functions, depending on selected menu

To access the Printer Menu:

1. Press the Cursor (**▼**) key to access the menu on the LCD as shown below.



2. Press the Function **(F1)** Key to open the Pop Up Window, select the desired print out mode by moving the Joystick Controller.
Pressing the Set **(SET)** key to start printing out the selected set up data.
Press the Escape **(ESC)** key to stop printing.

To Clear all data from a table:

1. Press the Function **(F2)** Key to open the Pop Up Window, select "Yes" by moving the Joystick Controller and pressing the Set **(SET)** key to delete all data from the selected programmed table.

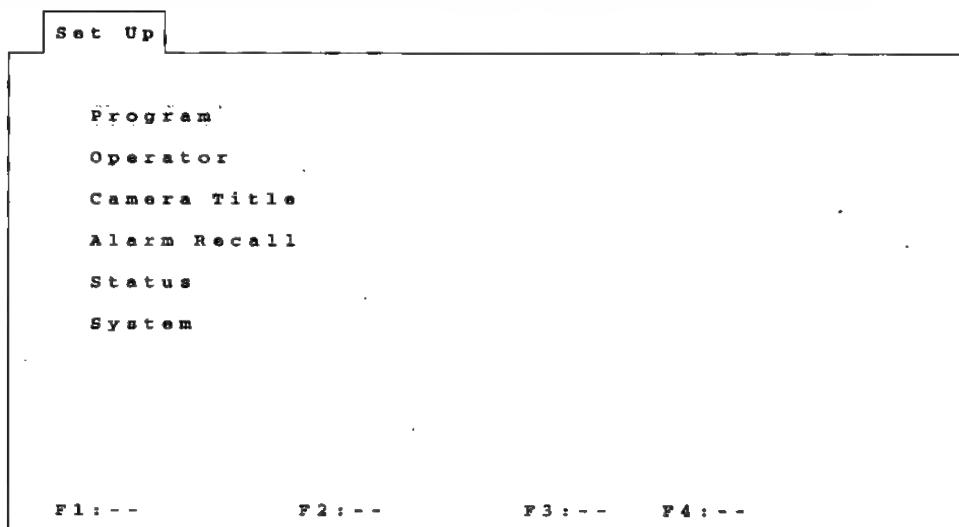
■ Set Up Programming Menu

As shown below, the Set Up Menu has six main sub menus: Program, Operator, Camera Title, Alarm Recall, Status and System. Three of these sub menus; Program, Operator and System, are further divided in to additional submenus.

Set Up	
Program	Program Sequence Page 69
	Tour Sequence Page 70
	Group Sequence Page 71
	Timer
	Event Schedule Page 73
	Special Day Schedule Page 74
	Alarm
	Alarm Mode Select Page 76
	Set Up Alarm Mode 1 Page 77
	Set Up Alarm Mode 2 Page 78
	Set Up Alarm Mode 3 Page 79
	Timer Alarm Schedule Page 81
Operator	Level Table Page 82
	Operator Registration Page 83
Camera Title Page 84
Alarm Recall Page 85
Status Page 85
System	Controller Page 86
	EXT Timing Select Page 87
	Compensation/VD2 Page 88
	RS-485 Site Communication Page 89
	Communication Speed Page 90
	Clock Page 91

1. Set Up Menu

After selecting the Set Up Menu on mode, the Set Up Menu allows access to six items as shown below..

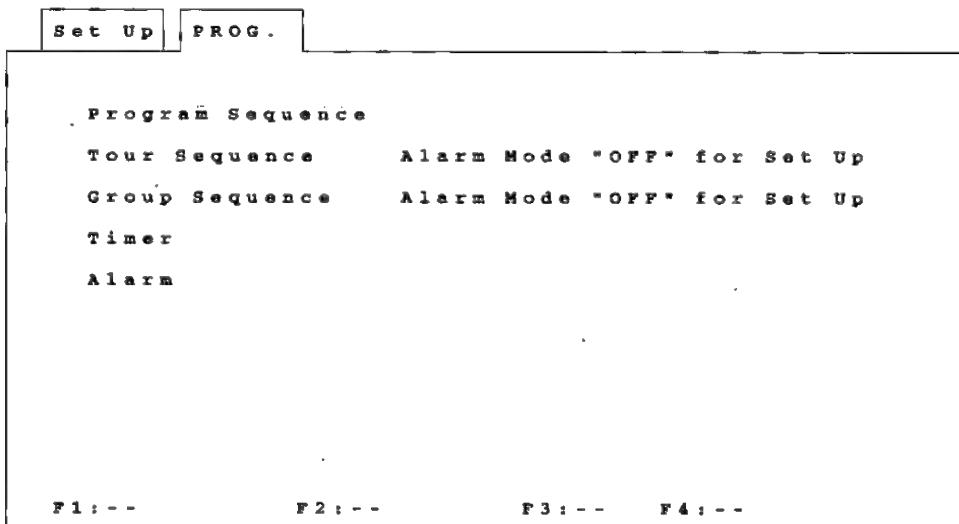


To Select an Item from the **Set Up Menu**:

1. Move the cursor to the desired item by moving the Joystick Controller.
2. Press the Set (**SET**) Key to execute the selection. The selected item appears on the monitor.
3. Press the Escape (**ESC**) Key to return to the original screen without changing any settings.

5 2. Program (PROG.) Menu

If in the example above, the cursor was moved to the Program item and the Set (**SET**) key was pressed, the Program Menu would allow access to five items as shown below.



To select an item from the **Program (PROG.) Menu**:

1. Move the cursor to the desired item by moving the Joystick Controller.
2. Press the Set (**SET**) Key to execute the selection. The selected item appears on the monitor.
In this example, Program Sequence is selected.
3. Press the Escape (**ESC**) Key to return to the Set Up Menu, if desired.

3. Program Sequence (P-SEQ)

After selecting the Program Sequence sub menu, a table appears on the monitor.

This table is used to program or edit a Program Sequence. A Program Sequence is a series of 64 steps assigned to a particular monitor. Each step can have a specific camera assigned to it. The Program Sequence number refers to the actual monitor that a sequence is assigned to. In the table below, the sequence is assigned to monitor #1. This table also has an Auto Skip function, which, when turned on, will automatically skip any step if there is no video signal present at that step. The duration in time of each step is determined by the Dwell Time setting.

Program Sequence M01

Step	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
CAM	01	10	27	43	21	60	33	09	18	25	42	39	03	22	50	41
Step	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
CAM	53	20	12	07	00											
Step	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
CAM																
Step	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
CAM																

To program or edit a Program Sequence do the following:

1. Move the cursor to the 3 position by moving the Joystick controller. Enter the desired sequence number, 1-16, by pressing the Numeric Keys and then pressing the Set (**SET**) Key to execute the selection.
2. Move the cursor to the 4 position by moving the Joystick controller. Press the Function (**F4**) Key to open the Pop Up Window, select Auto Skip On or Off by moving the Joystick Controller and pressing the Set (**SET**) Key to execute the selection.
3. Move the cursor to the 5 position by moving the Joystick Controller. Enter the desired Dwell Time, 1-30, by pressing the Numeric Keys.
4. Move the cursor to the 6 position by moving the Joystick Controller. Enter the desired camera number, 1-128, for each step by pressing the Numeric Keys.
5. When satisfied with all of the above steps, press the Escape (**ESC**) Key to escape from the programming mode. The cursor returns to the 3 position.
6. Repeat the above procedures to program other monitor program sequences.

4. Tour Sequence (T-SEQ)

This table is used to program or edit a Tour Sequence.

There are 32 Tour Sequences available, each with 64 steps.

Each step consists of a camera number, a dwell time, an associated Pan/Tilt preset position address (if applicable), and auxiliary switches 1 and 2.

No monitor number is assignable as a Tour Sequence will run on any monitor that the user can control.

Tour Sequence 01																Page 1 of 2		
Auto Skip		On																
Step	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16		
CAM	10	15	09	00	04	00	00	00	00	00	00	00	00	00	00	00		
PRE	20	64	11	09														
DWELL	03	00	01	02	05	00	00	00	00	00	00	00	00	00	00	00		
AUX 1																		
AUX 2																		
Step	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		
CAM	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
PRE	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
DWELL	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00		
AUX 1																		
AUX 2																		

□..On ..OFF

F1: Next Page F2: Pre Page F3: DEL F4: Pop Up

5

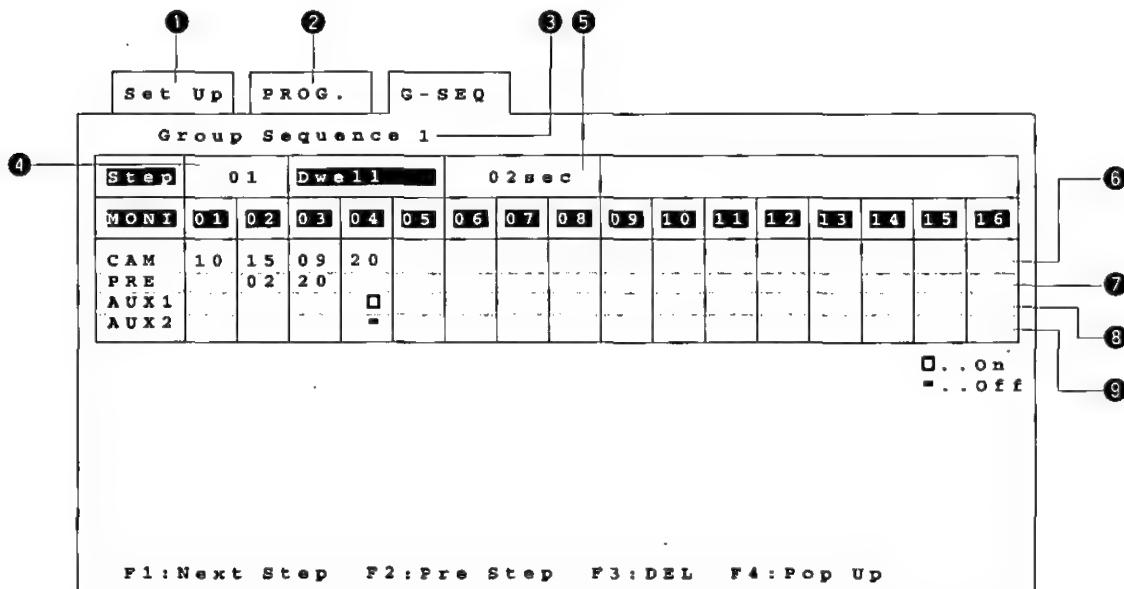
To program or edit a Tour Sequence do the following:

Note: Before programming or editing a Tour Sequence the Alarm Mode must be in the **Off** mode first. Follow Alarm Mode Setting Procedures on page 76.

1. Move the cursor to the 3 position by moving the Joystick Controller. Enter the desired tour sequence number, 1-32, by pressing the Numeric Keys, and then pressing the Set (**SET**) Key.
2. Move the cursor to the 4 position by moving the Joystick Controller. Press the Function (**F4**) Key to open the Pop Up Window. Select Auto Skip On or Off by moving the Joystick Controller and then pressing the Set (**SET**) Key to execute the selection.
3. Move the cursor to the 5 position by moving the Joystick Controller. Enter the desired camera number, 1-128, on each step by pressing the Numeric Keys.
4. Move the cursor to the 6 position by moving the Joystick Controller. Enter the associated Pan/Tilt preset address number (if applicable) by pressing the Numeric Keys.
5. Move the cursor to the 7 position by moving the Joystick Controller. Enter the desired Dwell Time, 1-30, by pressing the Numeric Keys.
6. Move the cursor to the 8 or 9 position by moving the Joystick Controller. Press the Function (**F4**) key to open the Pop Up Window, select AUX On or Off by moving the Joystick Controller and then pressing the Set (**SET**) Key to execute the selection.
7. Press the function (**F1**) key to select the next page or press the Function (**F2**) Key to select the previous page. Repeat the above procedures until a tour sequence is completely assembled.
8. When satisfied with all of the above steps, press the Escape (**ESC**) Key to escape from the programming mode. The cursor returns to the 3 position.
9. Repeat the above procedures to program other Tour Sequences.

5. Group Sequence (G-SEQ)

This table is used to program or edit a Group Sequence. A Group Sequence consists of up to 64 steps. Each step can assign to a maximum of 16 monitors, 16 cameras, each with preset position (if applicable) and AUX-1 and AUX-2 control. There are 8 Group Sequences available in this system.



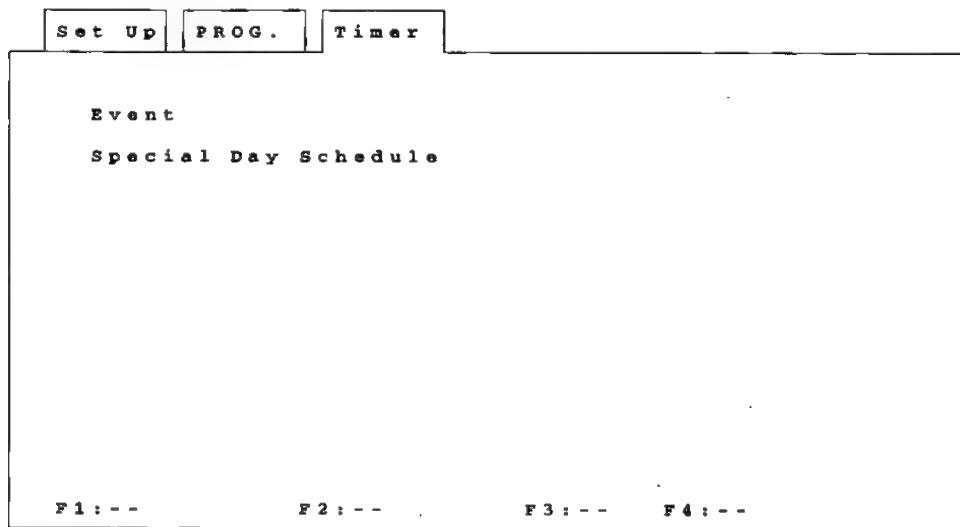
To program or edit a Group Sequence do the following:

Note: Before programming or editing a Group Sequence the Alarm Mode must be in the **Off** mode first. Follow Alarm Mode Setting Procedures on page 76.

1. Move the cursor to the 3 position by moving the Joystick Controller. Enter the desired Group Sequence number, 1-8, by pressing the Numeric Keys, then press the Set (**SET**) Key.
2. Confirm the desired step number is indicated, if not, move the cursor to position 4 by moving the Joystick controller, enter the desired step number, 1-64, by pressing the numeric keys.
3. Move the cursor to the 5 position by moving the Joystick Controller. Enter the desired Dwell Time, 1-30, by pressing the Numeric Keys.
4. Move the cursor to the 6 position by moving the Joystick Controller. Enter the desired camera number, 1-128, by pressing the Numeric Keys.
5. Move the cursor to the 7 position by moving the Joystick Controller. Enter the associated pan / tilt preset address number (if applicable) by pressing the Numeric Keys.
6. Move the cursor to the 8 or 9 position by moving the Joystick Controller. Press the Function (**F4**) key to open the Pop Up Window, select AUX On or Off by moving the Joystick Controller and then pressing the Set (**SET**) Key to execute the selection.
7. When satisfied with this step, press the Function (**F1**) Key to select the next step. Repeat the above procedures until the Group Sequence is completely assembled.
8. Press the Function (**F2**) Key to back up to the previous step.
9. When satisfied with all of the above steps, press the Escape (**ESC**) key to escape from the programming mode. The cursor returns to the 3 position.
10. Repeat the above procedures to program the other Group Sequences.

6. Timer Menu

As shown below, the Timer Menu allows access to two items, Event and Special Day Schedule. With these two items it is possible to enable or disable Tour and Group Sequences on selected monitors based on time of day, day of the week, and user-definable special days.



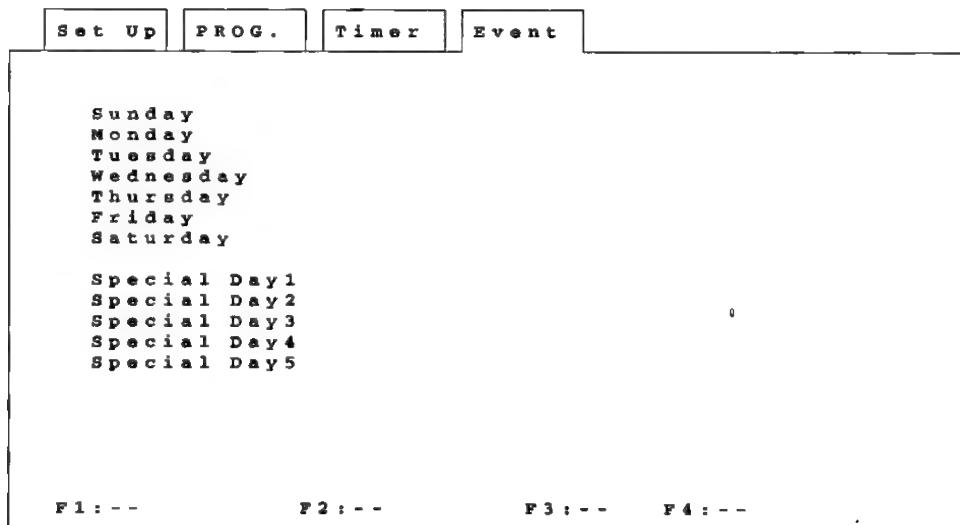
To select an item from the **Timer Menu**:

1. Move the cursor to the desired item by moving the Joystick Controller.
2. Press the Set (**SET**) Key to execute the selection. The selected item appears on the monitor.
3. Press the Escape (**ESC**) Key to return to the Program Menu, if desired.

5

7. Event Menu

Selecting the Event Menu allows access to the twelve items indicated below.



To select an item from the **Event Menu**:

1. Move the cursor to the desired item by moving the Joystick Controller.
2. Press the Set (**SET**) Key to execute the selection. The selected item appears on the monitor.
3. Press the Escape (**ESC**) Key to return to the Timer Menu, if desired.

8. Timer Event Schedule

This table is used to enable and disable Tour and Group Sequences according to the time of day and day of the week. There are 45 events available in one day.

To program or edit a Timer Event Schedule do the following:

1. Move the cursor to the 5 position by moving the Joystick Controller, and then press the Set (**SET**) Key.
2. Move the cursor to the 6, 7, 8 or 9 position by moving the Joystick Controller.
Enter the desired hours (military time) or minutes by pressing the Numeric Keys.
3. Move the cursor to the 11 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window.
Select the desired sequence type by moving the Joystick Controller, then enter the sequence number by pressing the Numeric Keys. Next, press the Set (**SET**) Key to execute the selection.
Note: The 11 position consists of nine monitor selections.
4. Move the cursor to the 12 position by moving the Joystick Controller.
By pressing the Set (**SET**) Key repeatedly, access to higher number monitors is possible.
5. Move the cursor to the 10 position by moving the Joystick Controller.
By pressing the Set (**SET**) Key repeatedly, access to lower number monitors is possible.
6. When satisfied with the programming of events on this page, press the Function (**F1**) key to select the next page. Repeat the above procedures until all events are programmed.
Note: As there is a total of 45 events available for a day and each page holds 15 events, there is a total of 3 pages available for each day.
7. Press the Function (**F2**) key to go back to the previous page.
8. When satisfied with all events, press the Escape (**ESC**) Key to escape from the programming mode, programmed events are displayed in chronological order and the cursor returns to the 5 position.
9. Similarly, repeat the above procedures to program other days.

Notes:

- When programming an event that extends into the next day, divides the event into two separate events and program both events separately.
- The sequence, that is activated by the programmed timer, will be continued until the other operation is made after the Stop time.

9. Special Day Schedule

Before programming this table, confirm that the Timer Event Schedule (Special Day 1-5) is programmed completely. This table allows for up to 48 days to be defined as special days. In the Timer Event Schedule there are 5 tables where the special days 1 through 5 are programmed for sequences. In this table, 48 specific, user defined, days of the year are assigned to one of those 5 special days.

5

To program or edit a Special Day Schedule do the following:

1. Move the cursor to the 4 position by moving the Joystick Controller, then press the Set (SET) Key.
2. Move the cursor to the 5 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window. Select the desired special day, S1 - S5 by moving the Joystick Controller and then pressing the Set (SET) Key to execute the selection.
3. Move the cursor to the 6 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window. Select the desired month by moving the Joystick Controller and then pressing the Set (SET) Key to execute the selection.
4. Move the cursor to the 7 position by moving the Joystick Controller.
Enter the desired day by pressing the Numeric Keys.
5. Move the cursor to the 8 position by moving the Joystick Controller.
Enter the last two numbers of the desired year by pressing the Numeric Keys.

Note: Valid dates are between the year 1996 and the year 2093. Enter "00" for the year of 2000.

6. When schedules are completely programmed, press the Escape (ESC) Key to escape the programming mode. The cursor returns to the 4 position.

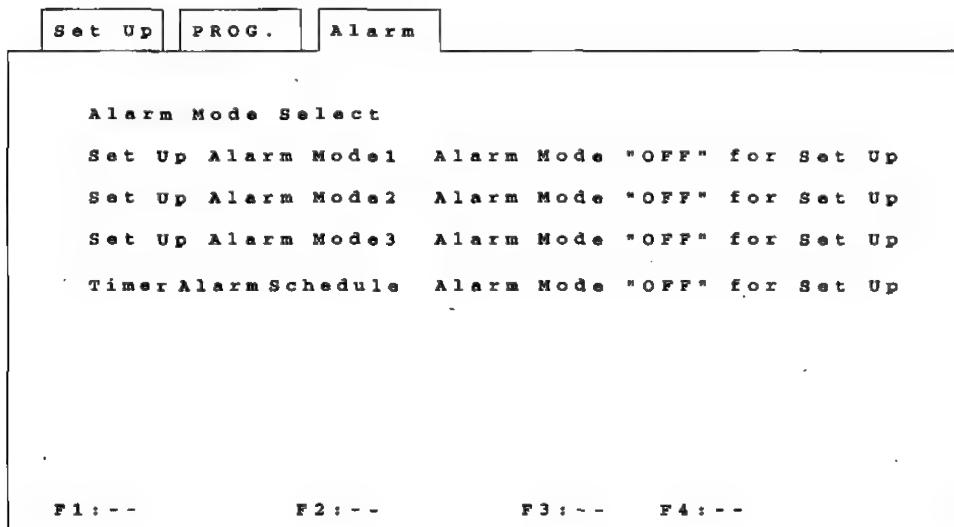
Note: When programming the above table be sure that month, day and year are all entered. Otherwise, if an item is not entered, the schedule will be activated as shown below.

SPE	M	D	Y	Activate
S1	Dec.	24	-	Dec. 24th of every year
S2	-	-	96	Everyday of 1996

Also, if there is an overlap of dates in the schedule, like the one shown here, the upper left most item is given precedence. In this example S1 is activated.

10. Alarm Menu

As shown below, the Alarm Menu allows access to five items: Alarm Mode Select, Set Up Alarm Modes 1-3 and Timer Alarm Schedule..



To select an item from the **Alarm Menu**:

1. Select the desired item by moving the Joystick Controller.
2. Press the Set (**SET**) Key to execute the selection. The selected menu appears on the monitor.
3. Press the Escape (**ESC**) Key to return the Program Menu, if desired.

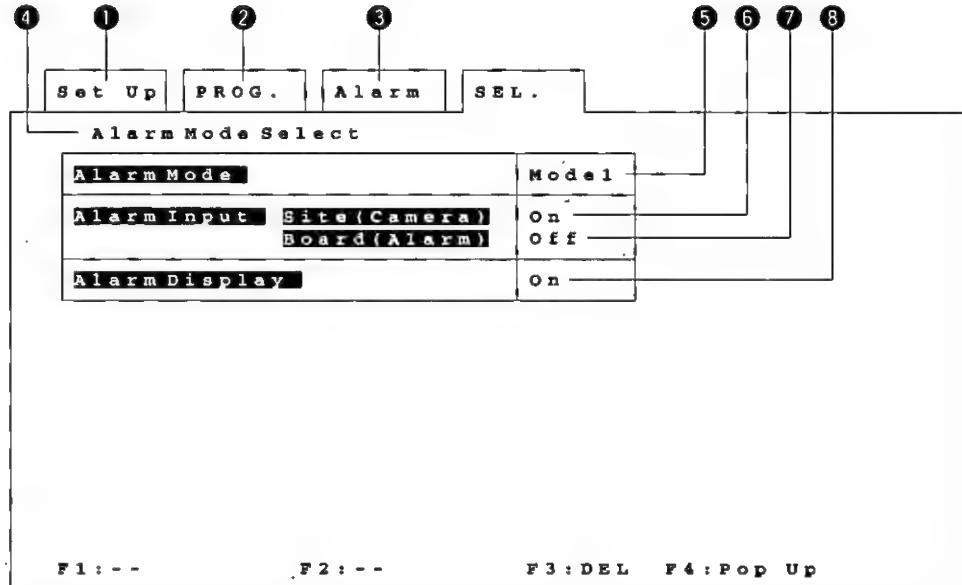
11. Alarm Mode Select

There are 5 Alarm modes available, Mode-1, Mode-2, Mode-3, Off mode and Timer mode.

In Alarm mode-1, All alarm inputs are displayed in sequential order on monitor #1.

In Alarm mode-2, All alarm inputs are displayed in sequential order on monitors #1 through #4.

In Alarm mode-3, Any alarm input can be displayed on any monitor, along with preset (if applicable) and AUX 1 and 2 control.

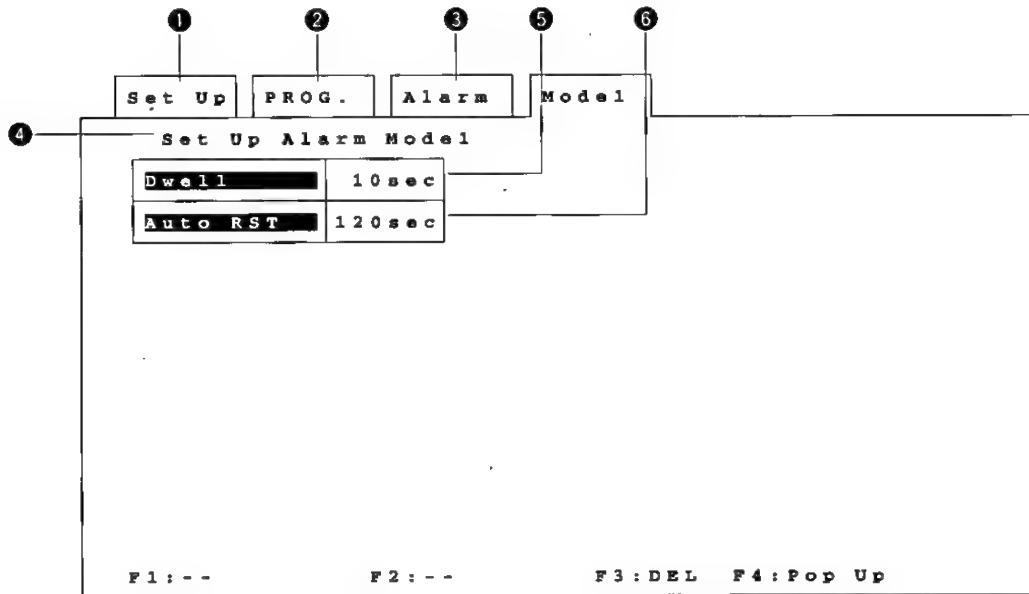


5

1. Move the cursor to the 4 position by moving the Joystick Controller, then press the Set (**SET**) Key.
2. Move the cursor to the 5 position by moving the Joystick Controller.
Press the Function (**F4**) key to open the Pop Up Window, select the desired alarm mode by moving the Joystick Controller, and then press the Set (**SET**) Key to execute the selection.
3. Move the cursor to the 6 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window, select camera site alarm input On or Off by moving the Joystick Controller, and then press the Set (**SET**) Key to execute the selection.
4. Move the cursor to the 7 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window, select alarm board input On or Off by moving the Joystick Controller, and then press the Set (**SET**) Key to execute the selection.
5. Move the cursor to the 8 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window, select alarm display On or Off on the monitor by moving the Joystick Controller, and then press the Set (**SET**) Key to execute the selection.
6. Press the Escape (**ESC**) Key to escape the Alarm Mode Select Setting mode. The cursor returns to the 4 position.

12. Set Up Alarm Mode 1

This table can be set up only after the alarm mode is set to the **Off** mode in the Alarm Mode Select table.

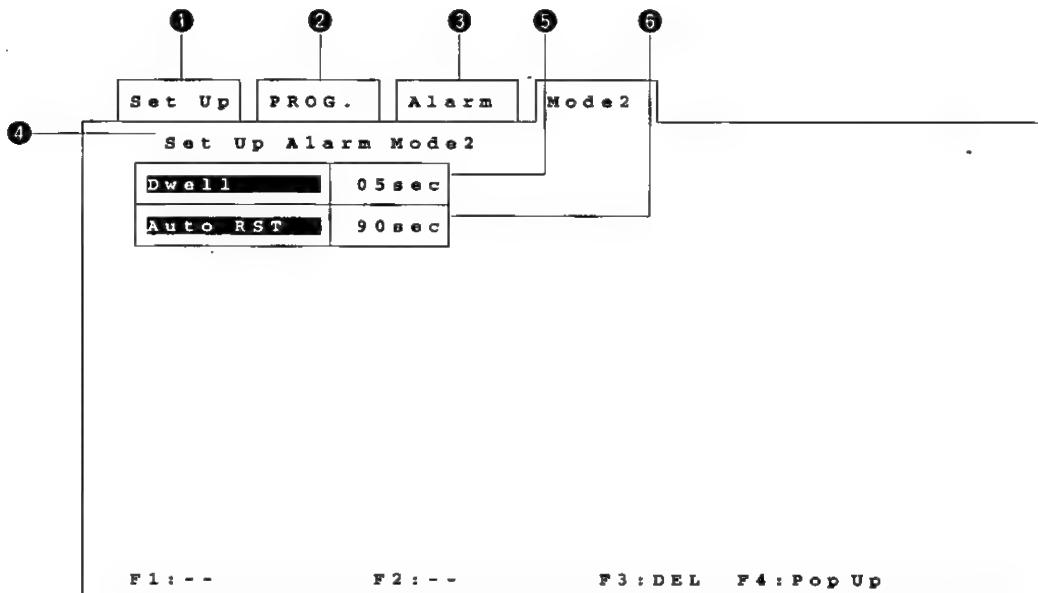


5

1. Move the cursor to the 4 position by moving the Joystick Controller, then press the Set (**SET**) Key.
2. Move the cursor to the 5 position by moving the Joystick Controller.
Enter the desired dwell time, 1-30, by pressing the Numeric Keys.
3. Move the Cursor to the 6 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window, select the desired Auto Reset (**RST**) time by moving the Joystick Controller, then press the Set (**SET**) Key to execute the selection.
Selected Time in the Window: 30, 60, 90, 120, 150, 180, Off
In this posion, press the Increment (**INC**) Switch or Decrement (**DEC**) Switch repeatedly to select the Auto Reset (**RST**) time from 1 second to 60 seconds with 1 second increments or decrements.
4. Press the Escape (**ESC**) Key to escape from the programming mode. The cursor returns to the 4 position.

13. Set Up Alarm Mode 2

This table can be set up only after the alarm mode is set to the **Off** mode in the Alarm Mode Select table.



5

1. Move the cursor to the 4 position by moving the Joystick Controller, then press the Set (**SET**) Key.
2. Move the cursor to the 5 position by moving the Joystick Controller.
Enter the desired dwell time, 1-30, by pressing the Numeric Keys.
3. Move the Cursor to the 6 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window, select the desired Auto Reset (**RST**) time by moving the Joystick Controller, then press the Set (**SET**) Key to execute the selection.
Selected Time in the Window: 30, 60, 90, 120, 150, 180, Off
In this position, press the Increment (**INC**) Switch or Decrement (**DEC**) Switch repeatedly to select the Auto Reset (**RST**) time from 1 second to 60 seconds with 1 second increments or decrements.
4. Press the Escape (**ESC**) Key to escape from the programming mode. The cursor returns to the 4 position.

14. Set Up Alarm Mode 3

This table can be set up only after the alarm mode is set to the **Off** mode in the Alarm Mode Select table. There is a total of 110 programmable alarm functions available through 10 pages of tables.

1. Move the cursor to the 4 position by moving the Joystick Controller, then press the Set (**SET**) Key.
2. Move the cursor to the 5 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window, select the desired Auto Reset (**RST**) time by moving the Joystick Controller, then press the Set (**SET**) Key to execute the selection.
Selected Time in the Window: 30, 60, 90, 120, 150, 180, Off
In this position, press the Increment (**INC**) Switch or Decrement (**DEC**) Switch repeatedly to select the Auto Reset (**RST**) time from 1 second to 60 seconds with 1 second increments or decrements.
3. Move the cursor to the 6 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window, select the desired spot or sequence mode to be assigned to the monitor by moving the Joystick Controller and pressing the Set (**SET**) Key to execute the setting.
4. Move the cursor to the 7 position by moving the Joystick Controller. Enter the desired alarm number, 1-128, by pressing the Numeric Keys.
5. Move the cursor to the 8 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window, select the desired spot or sequence mode by moving the Joystick Controller.
If a Tour or Group sequence is selected, use the Numeric Keys to select a particular Tour or Group sequence.
Press the Set (**SET**) Key to execute the selection.
6. Move the cursor to the 9 position by moving the Joystick Controller. If the spot mode was selected in step 5 enter the desired camera number, 1-128, by pressing the Numeric Keys.
7. Move the cursor to the 10 position by moving the Joystick Controller. If the spot mode was selected in step 5 enter the desired preset number, if applicable, by pressing the Numeric Keys.
8. Move the cursor to the 11 position by moving the Joystick Controller. If the spot mode was selected in step 5 enter the desired dwell time, 1-30, by pressing the Numeric Keys.
9. Move the cursor to the 12 position by moving the Joystick Controller. If the spot mode was selected in step 5 press the Function (**F4**) Key to open the Pop Up Window, select AUX On or Off by moving the Joystick Controller and pressing the Set (**SET**) Key to execute the selection.
10. Move the cursor to the 13 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window, select either Set or Reset, by moving the Joystick Controller and pressing the Set (**SET**) Key to execute the selection.
11. Press the Escape (**ESC**) Key to escape from the programming mode. The cursor returns to the 4 position.

Note: An 'E' (Error) will appear in the table if an attempt is made to assign an incompatible mode to a monitor. For example, if an attempt is made to assign a Tour sequence to a monitor that is designated as a Spot monitor.

The follows are explanation on the setup example 1 to 6 in the table.

1. Spot (S) Setup example 1

When an Alarm is activated, it is able to display the desired camera picture on the desired monitor.

Example 1 shows:

An Alarm 1 is activated, Monitor 1 displays Camera 1 picture at preset 1 position.

After the above an Alarm 2 is activated, Monitor 1 switches and displays Camera 2 picture for 5 seconds.

Then Monitor 1 displays Camera 1 picture again for 10 seconds, after that Monitor 1 displays both camera's pictures alternately.

Memo

- It is recommended to program in advance as a Tour Sequence if plural Spot Cameras are assigned to a monitor by activating an alarm.
- The following setup is used to maintain the latest alarmed Spot picture on a Monitor.
 1. Set the both Dwell time and Auto Reset time to 30 seconds.
The previous Spot picture may appear in a moment in case that plural alarms are activated for a short period of time.
 2. Set the Auto Reset time shorter than the Dwell time.
The alarm mode will be reset and Sequence or Spot picture will be displayed in case that the Auto Reset time reaches to Off before activating the following Alarm.

2. Tour (T) Sequence Setup example 2

When an Alarm is activated, it is able to run a desired Tour Sequence on the desired monitor if the Tour Sequence is programmed in advance.

Example 2 shows:

An Alarm 3 is activated, Tour Sequence 1 runs on Monitor 2

3. Group (G) Sequence Setup example 3

When an Alarm is activated, it is able to run the desired Group Sequence on the assigned monitor if the Group Sequence is programmed in advance.

Example 3 shows:

An Alarm 4 is activated, Group Sequence 1 runs on Monitor 3 and 4.

Important

The Monitors used for Group Sequence should be assigned in setup programming before.

4. Combination Setup example 4

When an Alarm is activated, it is able to activate the plural functions combined program in advance.

Example 4 shows:

An Alarm 5 is activated, Monitor 5 displays Camera 3 picture at preset 2 position. At the same time, Tour Sequence 2 runs on Monitor 2 and Group Sequence 2 runs on Monitor 7 and 8.

5. Error (E) display

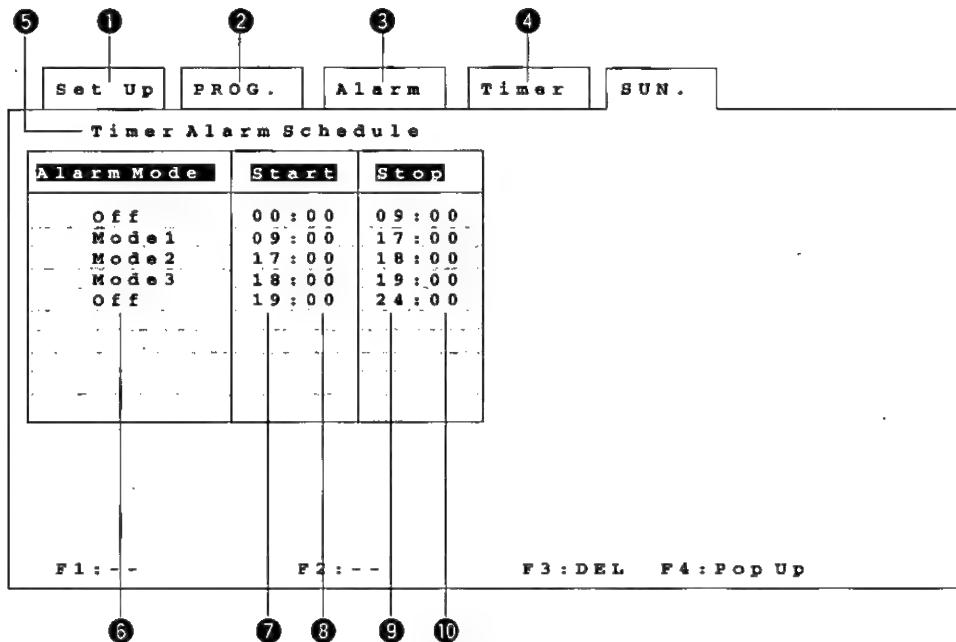
An "E"(Error) will appear in the table if an attempt is made to assign an incompatible mode to a monitor.

For example,

- Error(E) Setup example 5
An attempt is made to assign a Tour (T) Sequence 3 to Monitor 9 that is designated as a Spot monitor.
- Error(E) Setup example 6
An attempt is made to assign plural sequences to a monitor.
The one of attempts is valid and the others are not valid.

15. Timer Alarm Schedule

This table can be set up only after the alarm mode is set up to the **Off** mode in the Alarm Mode Select table. This table is used to enable and disable the Alarm Modes according to the time of day and day of the week.



To **program** or edit a Timer Alarm Schedule do the following:

1. Move the cursor to the desired item (Day or Special Day) by moving the Joystick Controller.
2. Press the Set (**SET**) Key to execute the selection. The selected item appears on the monitor.
3. Move the cursor to the 5 position by moving Joystick Controller, then press the Set (**SET**) Key.
4. Move the cursor to the 6 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window.
Select the desired alarm mode by moving the Joystick Controller, then press the Set (**SET**) Key execute the selection.
5. Move the cursor to the 7, 8, 9 or 10 position by moving the Joystick Controller.
Enter the desired hours (military time) or minutes by pressing the Numeric Keys.
6. When satisfied with all alarms, press the Escape (**ESC**) Key to escape from the programming mode. Programmed alarms are displayed in chronological order and the cursor returns to the 5 position.
7. Similarly, repeat the above procedures to program other days and special days.

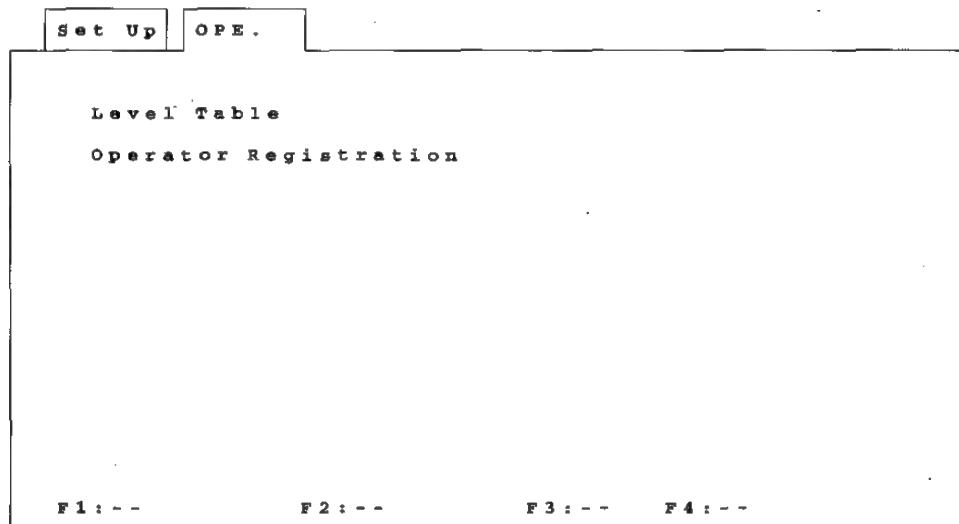
Note: When programming an alarm that extends into the next day, divides the alarm into two separate alarms and program both alarms separately.

Caution: The alarm table, that is programmed on the special days 1 - 5, will be activated at the date programmed on the Special Days Schedule.

Refer to the Special Days Schedule on page 74.

16. Operator Menu

The operator menu allows access to two items, the level table and operator registration.



To select an item from the **Operator Menu**:

1. Select the desired item by moving the Joystick Controller.
2. Press the Set (**SET**) Key to execute the selection. The selected menu appears on the monitor.
3. Press the Escape (**ESC**) Key to return to the Set Up Menu.

17. Level table

This table is used to determine what set up functions and operations may be performed at the 5 operator levels.

Set Up	1 2 3 4 5	Operation	1 2 3 4 5
Set Up Menu	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	CAM Select	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P-SEQ	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	P-SEQ Select	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
T-SEQ	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	T-SEQ Select	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
G-SEQ	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	G-SEQ Select	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Timer	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Alarm ACK/RST	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Alarm	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Priority Lock	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Operator	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	MONI in Select	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Camera Title	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Controller	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
EXT Timing	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
COMP/VD2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
RS-485 Site	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Commu. Speed	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Clock	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
Camera Set Up	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		

1. Move the cursor to the 3 position by moving the Joystick Controller, then press the Set (**SET**) Key.
2. Move the cursor to the 4 position by moving the Joystick Controller.
Press the Function (**F4**) Key to open the Pop Up Window, select the desired level by moving the Joystick Controller. Then press the Set (**SET**) Key to execute the selection.
3. Repeat the above procedures until all items have levels assigned to them.
4. When completed with all level assigning, press the Escape (**ESC**) Key to escape from the programming mode. The cursor returns to the 3 position.

18. Operator Registration

This table is used to establish operator numbers for the users of the system, along with associated passwords, operator levels and priorities. Up to 30 operators may be registered. Additionally, operator limits for camera access are set in this table.

The diagram shows a table titled "Operator 01" with a header "Page 1 of 2." The table has columns for Level, Priority, and Password, with sub-columns for 5, 10, and 12345. The table is filled with numeric values. Below the table are three legend entries: "□.. Video & PTZ Cont.", "▲.. Video Only", and "--- Video Lockout". At the bottom are function keys: F1: Next Page, F2: Pre Page, F3: DEL, and F4: Pop Up. The table is controlled by a joystick with numbered buttons 1 through 7. Button 1 is above the Set Up key, 2 is above OPE., 3 is above REG., 4 is to the left of the table, 5 is to the right of the table, 6 is to the right of the 12345 column, and 7 is to the right of the bottom legend.

Operator 01										Page 1 of 2.						
Level	5		Priority		10		Password		12345							
	CAM	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
SEL	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
CAM	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
SEL	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
CAM	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
SEL	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
CAM	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
SEL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Legend:

- .. Video & PTZ Cont.
- ▲.. Video Only
- Video Lockout

Function Keys:

- F1: Next Page
- F2: Pre Page
- F3: DEL
- F4: Pop Up

1. Move the cursor to the 3 position by moving the Joystick Controller.
Enter the operator number, 1-30, by pressing the Numeric Keys, and then press the Set (SET) Key.
2. Move the cursor to the 4 position by moving the Joystick Controller.
Enter the desired Level number, 1-5, by pressing the Numeric Keys.
3. Move the cursor to the 5 position by moving the Joystick Controller.
Enter the desired Priority number, 1-30, by pressing the Numeric Keys.
4. Move the cursor to the 6 position by moving the Joystick Controller.
Enter the desired Password number, which must be five digits long, by pressing the Numeric Keys.
5. Move the cursor to the 7 position by moving the Joystick Controller.
Press the Increment (INC) Switch or Decrement (DEC) Switch repeatedly to select the desired operator limit.
6. Repeat the above procedures until all operator limits are completed in this table.
7. When completed this table, press the Function (F1) Key to select the next page. Repeat the above procedures until all operator limits are completed.
8. Press the Function (F2) Key to back up to the previous page.
9. When satisfied with all of above steps, press the Escape (ESC) Key to escape from the programming mode. The cursor returns to the 3 position.
10. Similarly, repeat the above procedures to register all other operators.

Note: Operator 00 is allotted for the Timer. Initially, priority 30 is selected at the factory.

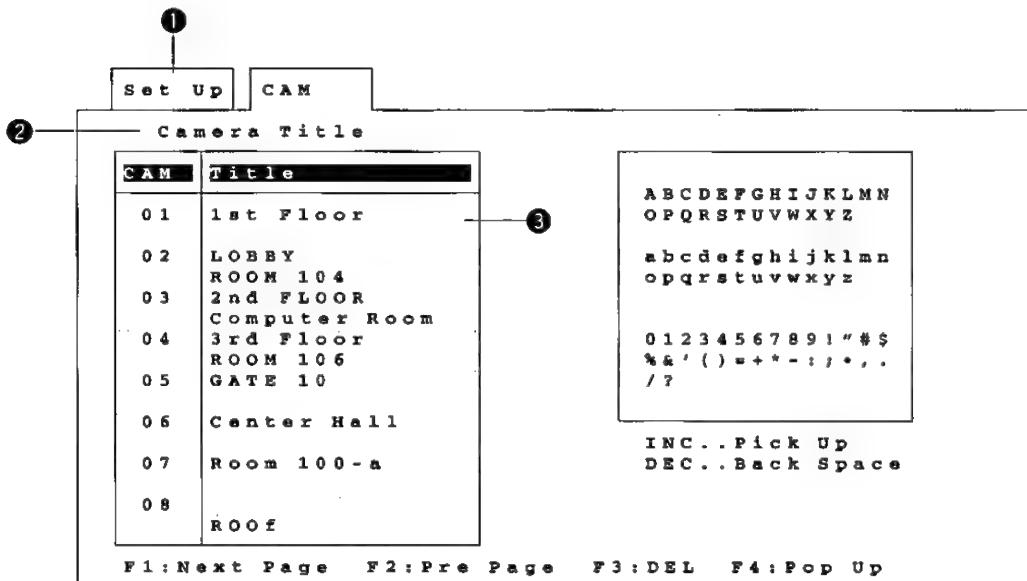
Cautions:

- Be sure to change the Password, that is selected at the factory initially, to prevent improper usage.
- If all operator's level are registered to refuse the item "Set Up Menu" or "Operator" in the Level Table, the Set Up Menu will not be able to operate again.

19. Camera Title

There are 128 camera titles available.

Each title is composed of 15 characters per line, times 2 lines.



1. Move the cursor to the 2 position by moving the Joystick Controller, then press the Set (**SET**) Key.
2. Move the cursor to the 3 position by moving the Joystick Controller.
Press the Function (**F4**) key to open the Pop Up Window, the character table appears on the right side of the table as shown above.
3. Select the desired character by moving the Joystick Controller to place the cursor over the desired character. Then press the Increment (**INC**) Switch to pick up the character, and place it in the title area.
4. If a wrong character is selected, press the Decrement (**DEC**) Switch to delete the character positioned immediately to the left of the cursor. Use the Joystick and Increment (**INC**) to select the correct character.
5. Repeat the above procedures until the setting up of the title for a certain camera is completed. Press the Set (**SET**) Key to save the title.
6. Repeat the above procedures for the rest of the cameras on this page. When satisfied with the titles, press the Function (**F1**) Key to select the next page. Repeat the above procedures until the titles for all cameras are completed.
7. Press the Function (**F2**) Key to go back to the previous page.
8. When satisfied with all the camera titles, press the Escape (**ESC**) Key to escape from the programming mode. The cursor returns to the 2 position.

20. Alarm Recall

There are 99 alarm records stored in chronological order in 7 pages of tables.

The tables also show all involved monitor numbers when Alarm Mode-3 is activated, and indicates the alarm mode number when Alarm Mode-1 or Alarm Mode-2 is activated.

Set Up		AL REC		Page 1 of 7									
Alarm Recall													
NO.	Date	Alarm	Monitor										
53	JUN. 14 23:09:11	1-009	01 02 03 04 05 06 07 08>										
52	JUN. 11 10:32:37	1-021	06										
51	MAY. 05 01:12:08	0-062	10										
50	MAR. 03 21:59:00	1-012	10 11 12										
49	MAR. 03 12:00:00	1-026	04 16										
48	MAR. 03 11:59:20	1-108	01										
47	FEB. 26 23:59:00	0-008	09										
46	FEB. 25 00:00:00	0-117	16										
45	FEB. 02 12:47:32	0-047	11 15										
44	JAN. 11 02:00:00	1-010	Mode 2										
43	JAN. 01 00:00:01	1-063	Mode 2										
42	DEC. 25 23:00:00	1-059	Mode 2										
41	NOV. 11 08:28:59	1-042	Mode 1										
40	AUG. 21 09:07:16	1-039	Mode 1										
39	AUG. 11 21:09:37	1-011	Mode 1										
38	JUL. 31 11:11:11	1-006	06										

F1: Next Page F2: Pre Page F3: -- F4: --

Press the Function (F1) Key to select the next page. Press the Function (F2). Key to back up to the previous page.

Note: The item Alarm indicates the description as shown below.

- 0: Camera Site Alarm with corresponded camera number.
- 1: Alarm Board Input with alarm input number

21 Status

This table shows the system status in real time.

Set Up		Status		DEC. 07 '93 23:59:59										
Status														
MONITOR	CAMERA	MODE	CTRLR	OPERATOR	PRIORITY									
01		11 T 01 F	1	01	05									
02 in		21 SPOT			00									
03		09 T 08 F			--									
04		48 G 2 S			--									
05		63 G 2 S			--									
06		17 G 2 S			--									
07		10 CAM	2	11	01									
08		03 SET	8	02	03									
09		35 T 64 F			00									
10		09 SPOT	4	26	10									
11		49 T 11 F			03									
12		53 G 1 B			02									
13		49 G 1 B			02									
14		26 G 1 B			02									
15		30 P	5	21	30									
16		51 P F			--									

F1: -- F2: -- F3: -- F4: --

Possible Active modes, as indicated in this table, are defined below.

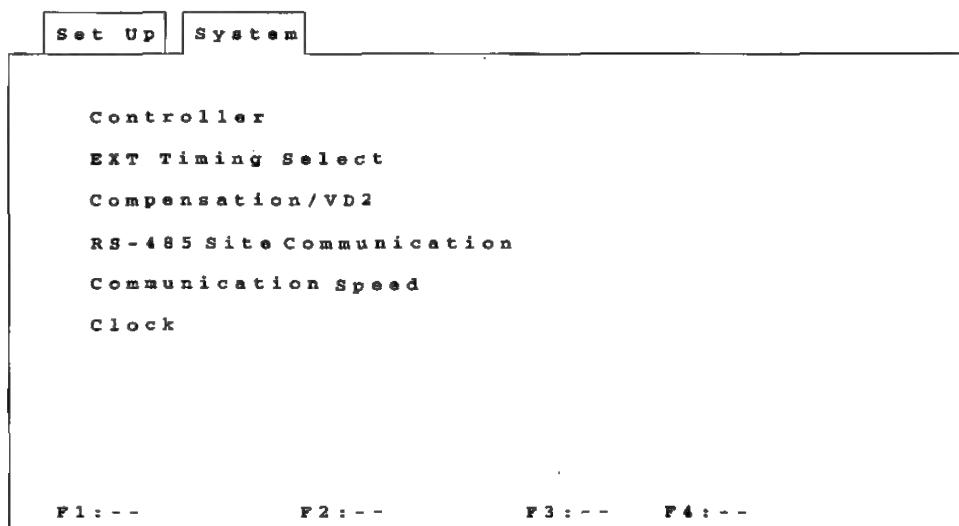
- in : Displays video connected to the Video Output Board
- SPOT : Spot
- P : Program Sequence
- T : Tour Sequence
- G : Group Sequence
- CAM : Camera Setting

- SET : Setup
- F : Forward Sequence
- B : Backward Sequence
- S : Stopped

Note: If the monitor is connected to the CPU Board, this table is always displayed on the monitor.

22. System Menu

As shown below, the system menu allows access to six items.

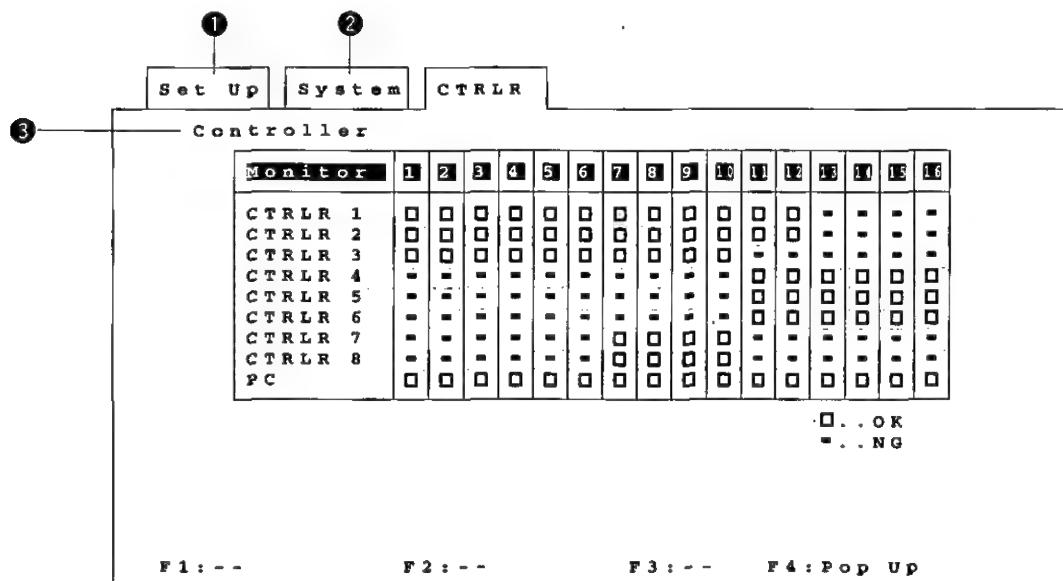


To select an item from the **System Menu**:

1. Select the desired item by moving the Joystick Controller.
2. Press the Set (SET) Key to execute the selection. The selected menu appears on the monitor.
3. Press the Escape (ESC) Key to return to the Set Up Menu.

23. Controller

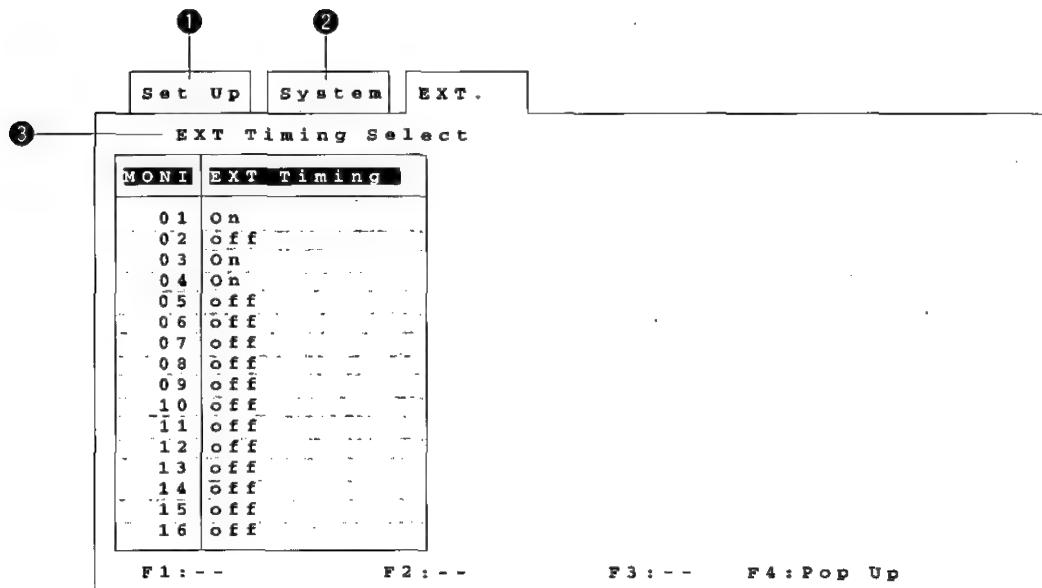
This table is used to prevent specific WV-CU550A System controllers from ever controlling the outputs of specific monitors. This feature prevents an operator from unintentionally gaining control over a monitor that may not be associated with their station.



1. Move the cursor to the 3 position by moving the Joystick Controller, then press the Set (SET) Key.
2. Move the cursor to the desired controller and monitor position by moving the Joystick Controller. Press the Increment (INC) Switch or Decrement (DEC) Switch repeatedly to select OK or NG.
3. Repeat the above procedure until the table is completed.
4. After completing the table, press the Escape (ESC) Key to escape from the programming mode. The cursor returns to the 3 position.

24. EXT Timing Select

This table permits the sequence dwell time on the selected monitor to be synchronized with the time lapse mode set in the associated Time Lapse VCR.



1. Move the cursor to the 3 position by moving the Joystick Controller, then press the Set (SET) Key.
2. Move the cursor to the desired monitor position by moving the Joystick Controller. Press the Function (F4) Key to open the Pop Up Window. Next, select EXT On or Off by moving the Joystick Controller and then pressing the Set (SET) Key to execute the selection.
3. When satisfied with all settings, press the Escape (ESC) Key to escape from the programming mode. The cursor returns to the 3 position.

Note: If External Timing is selected for a monitor, any Dwell Time programmed in the sequence tables for that monitor will be invalid.

Minimum duration for camera switching pulse needs to be more than one (1) second.

25. Compensation/VD2

This table is used to for selecting the most suitable position of the cable-loss compensator and to turn on or off the VD2 (Sync. signal) or the control data for the cameras.

5. 1. Move the cursor to the 3 position by moving the Joystick Controller, then press the Set (SET) Key.

2. Move the cursor to the 4 position by moving the Joystick Controller.

Press the Increment (INC) Switch or Decrement (DEC) Switch repeatedly to select the most suitable cable length as shown below.

S: Up to 1,300 ft (400m)

M: 1,300 ft (400m) to 2,300 ft (700m)

L: 2,300 ft (700m) to 3,000 ft (900m)

(When using RG-59U, BELDEN 9259 or equivalent cable)

3. Move the cursor to the 5 position by moving the Joystick Controller.

Press the Increment (INC) Switch or Decrement (DEC) Switch to select VD2 On or Off and Data On or Off.

VD2: Select On position if the camera is applicable VD2,
and the others select Off position.

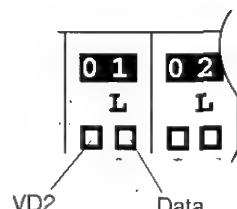
Data: Select On position If the associated camera site units are connected,
and the others always select Off position.

4. Repeat the above procedures until the table is completed.

5. When completed this table, press the Function (F1) Key to select the next page. Repeat the above procedures until all cameras settings are completed.

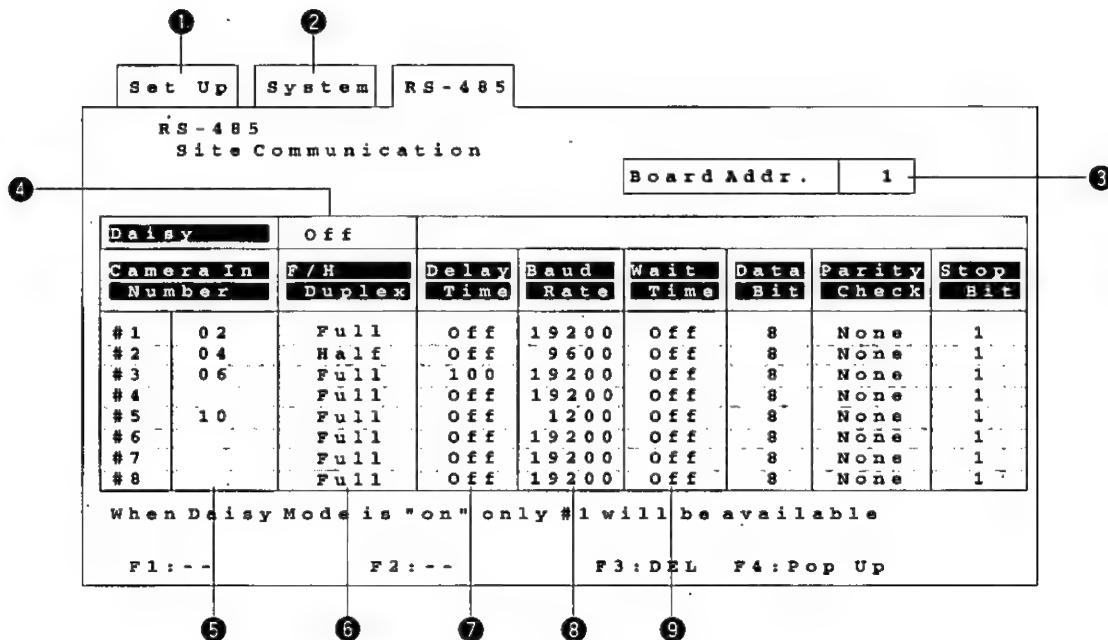
6. Press the Function (F2) Key to back up to the previous page.

7. When all above settings are completed, press the Escape (ESC) Key to escape from the programming mode. The cursor returns to the 3 position.



26. RS-485 Site Communication

This table is used to set the Communication Parameters between the Data Boards installed in the Matrix Switcher and the Camera Site..



1. Move the cursor to the 3 position by moving the Joystick Controller.
Enter the desired data board number, 1-8, by pressing the Numeric Key, then press the Set (SET) Key.
2. Move the cursor to the 4 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window, select Daisy-Chain connection (On) or Home Run Connection (Off) by moving the Joystick Controller and then pressing the Set (SET) Key to execute the selection.
3. Move the cursor to the 5 position by moving the Joystick Controller.
Enter the desired camera number for site communication by pressing the Numeric Keys and then pressing the Set (SET) Key to execute the selection.
4. Move the cursor to the 6 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window, select Full or Half Duplex by moving the Joystick Controller and then pressing the Set (SET) Key to execute the selection.
5. Move the cursor to the 7 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window, select the desired Delay Time by moving the Joystick Controller and then pressing the Set (SET) Key to execute the selection.
6. Move the cursor to the 8 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window, select the desired Baud Rate by moving the Joystick Controller and then pressing the Set (SET) Key to execute the selection.
7. Move the cursor to the 9 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window, select the desired Wait Time by moving the Joystick Controller and then pressing the Set (SET) Key to execute the selection.
8. Repeat the above procedures until the table is completed.
9. When all settings are completed, press the Escape (ESC) Key to escape from the programming mode. The cursor returns to the 3 position.

27. Communication Speed

This table is used to set the Communication Parameters between the System Controllers (or PCs) and the Matrix Switcher.

	Baud Rate	Wait Time	Data Bit	Parity Check	Stop Bit	Flow Control	Address Control
CU1	1200	100	8	None	1	None	None
CU2	1200	100	8	None	1	None	None
CU3	1200	200	8	None	1	None	None
CU4	2400	100	8	None	1	None	None
CU5	4800	300	8	None	1	None	None
CU6	9600	300	8	None	1	None	None
CU7	1200	500	8	None	1	None	None
CU8	2400	100	8	None	1	None	None
AL	1200	1000	8	None	1	None	None
PC	9600	None	7	odd	2	RS/CS	Off
Unit No.	1						

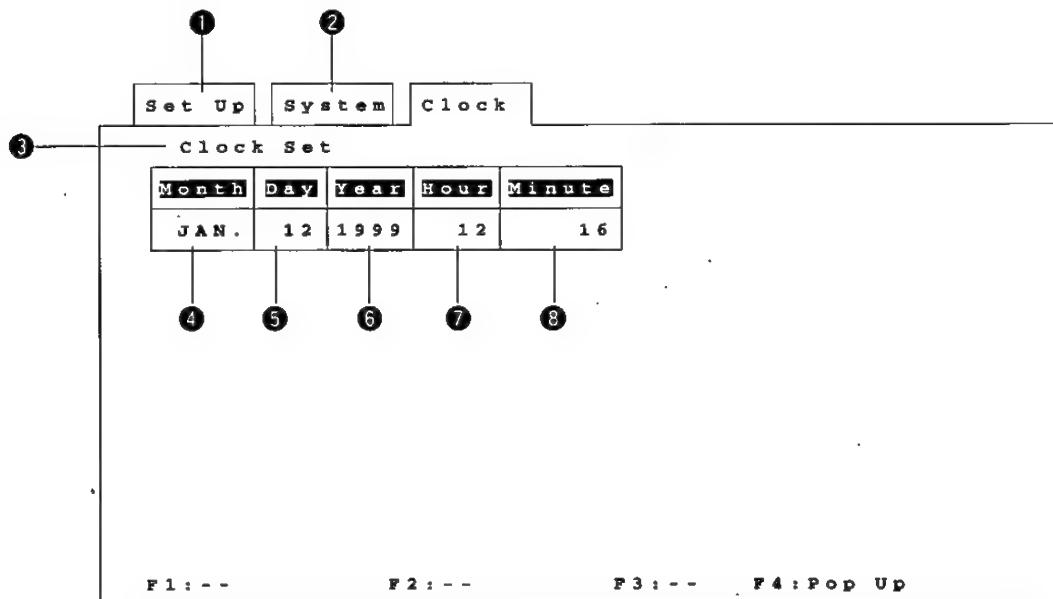
F1: -- F2: -- F3: -- F4: Pop Up

1. Move the cursor to the 3 position by moving the Joystick Controller, then press the Set (SET) Key.
2. Move the Cursor to the 4 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window, select the desired Baud Rate by moving the Joystick Controller and pressing the Set (SET) Key to execute the selection.
3. Move the Cursor to the 5 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window, select the desired Wait Time by moving the Joystick Controller and pressing the Set (SET) Key to execute the selection.
4. Move the Cursor to the 6 position by moving the Joystick Controller.
Press the Function (F4) key to open the Pop Up Window, select the desired Data Bit by moving the Joystick Controller and pressing the Set (SET) Key to execute the selection.
5. Move the Cursor to the 7 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window, select the desired Parity Check by moving the Joystick Controller and pressing the Set (SET) Key to execute the selection.
6. Move the Cursor to the 8 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window, select the desired Stop Bit by moving the Joystick Controller and pressing the Set (SET) Key to execute the selection.
7. Move the cursor to the 9 position by moving the Joystick Controller.
Press the Function (F4) Key to open the Pop Up Window, select Address Control On or Off by moving the Joystick Controller and then pressing the Set (SET) Key to execute the selection.
8. Move the cursor to the 10 position by moving the Joystick Controller.
Enter the desired Unit Number, 1-16, by pressing the Numeric Keys and then pressing the Set (SET) Key to enter the Unit Address.
9. Repeat the above procedures until the table is completed.
10. When all settings are completed, press the Escape (ESC) Key to escape from the programming mode. The cursor returns to the 3 position.

28. Clock Set

This table is used to set the present time and date.

Note: The date and time are updated when the Escape (**ESC**) Key is pressed.



1. Move the cursor to the 3 position by moving the Joystick Controller, then press the Set (**SET**) Key.
2. Move the cursor to the 4 position by moving the Joystick Controller.
Press the Function (**F4**) key to open the Pop Up Window.
Select the desired month by moving the Joystick Controller, and pressing the Set (**SET**) Key.
3. Move the cursor to the 5 position by moving the Joystick Controller.
Enter the desired day by pressing the Numeric Keys.
4. Move the Cursor to the 6 position by moving the Joystick Controller.
Enter the desired year by pressing the Numeric Key.
5. Move the cursor to the 7 position by moving the Joystick Controller.
Enter the desired hours (military time) by pressing the Numeric Keys.
6. Move the cursor to the 8 position by moving the Joystick Controller.
Enter the desired minutes by pressing the Numeric Keys.
7. Press the Escape (**ESC**) Key to escape from the programming mode. The cursor returns to the 3 position.

OPERATING PROCEDURES

Power Up Display

When the power switch of the Matrix Switcher is turned on, a screen similar to the one shown below is displayed on the all monitors. There are three slightly different displays possible: Cold Start, Normal Start and Hot Start. The Cold Start is the initial display seen when the Matrix Switcher is turned on for the first time. The Normal Start is displayed if the system has been shut off for two consecutive midnights (for example: the system is turned off Monday at 11:00 P.M. and turned on Wednesday at 1:00 A.M., for a total of 26 hours off). The differences between Normal and Hot Starts are as follows:

- 1) With a Normal Start the ROM version numbers are displayed while in the Hot Start they are not (ROM=Read Only Memory).
- 2) With a Normal Start the monitor screens will be blank, but with a Hot Start whatever monitor/camera combinations were displayed at power off will be displayed again (like a Resume function).
- 3) If the power is turned on with a Normal Start during a Timer Event, the Timer Event will not occur. However, if the power is turned on with a Hot Start during a Timer Event, the Timer Event will occur.

Matrix Switcher
Model WJ-SX550A
"Normal Start"

CPU Board SW.	Position
Unit No.	01
Video	NTSC
Character Type	1
VD/VS	VS

ROM	Ver.
CPU	X . XX
Control	X . XX
Alarm	No. 1
Output	No. 1

Caution : If the WJ-AD550 Extension Unit is used in the system, turn the Extension Unit power on before turning power on the WJ-SC550A Matrix Switcher.

OPERATING PROCEDURE

Before starting the following procedures, all system components should be turned on.

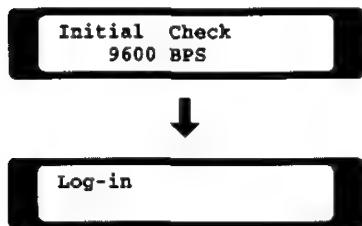
1. Log-in

1. Turn on the power switches of all system components.

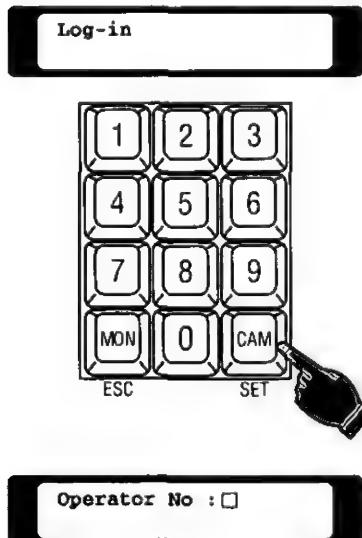
Caution: If the WJ-AD550 Extension Unit is used in the system, turn the Extension Unit power on before turning power on the WJ-SX550A Matrix Switcher.

2. Press the Controller On/Off Switch located on the rear of the System Controller, to the ON position.

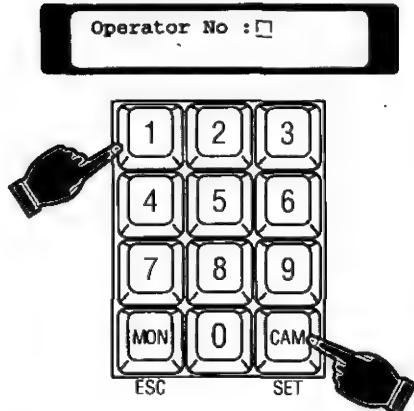
The following displays appear on the LCD.



3. Press the **CAM (SET)** Key, the Operator No. display now appears on the LCD.

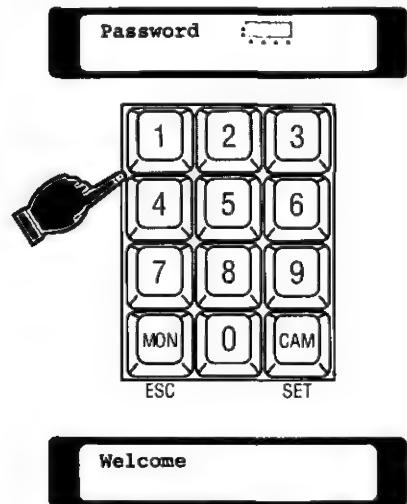


4. Enter the registered Operator No. by pressing the Numeric Keys, then press the **CAM (SET)** Key. Initially, 1 is selected at the factory.



See page 83 for details on registering operator numbers.

5. Enter the registered Password (five numbers) by pressing the Numeric Keys. Initially, 12345 are selected at the factory.



6

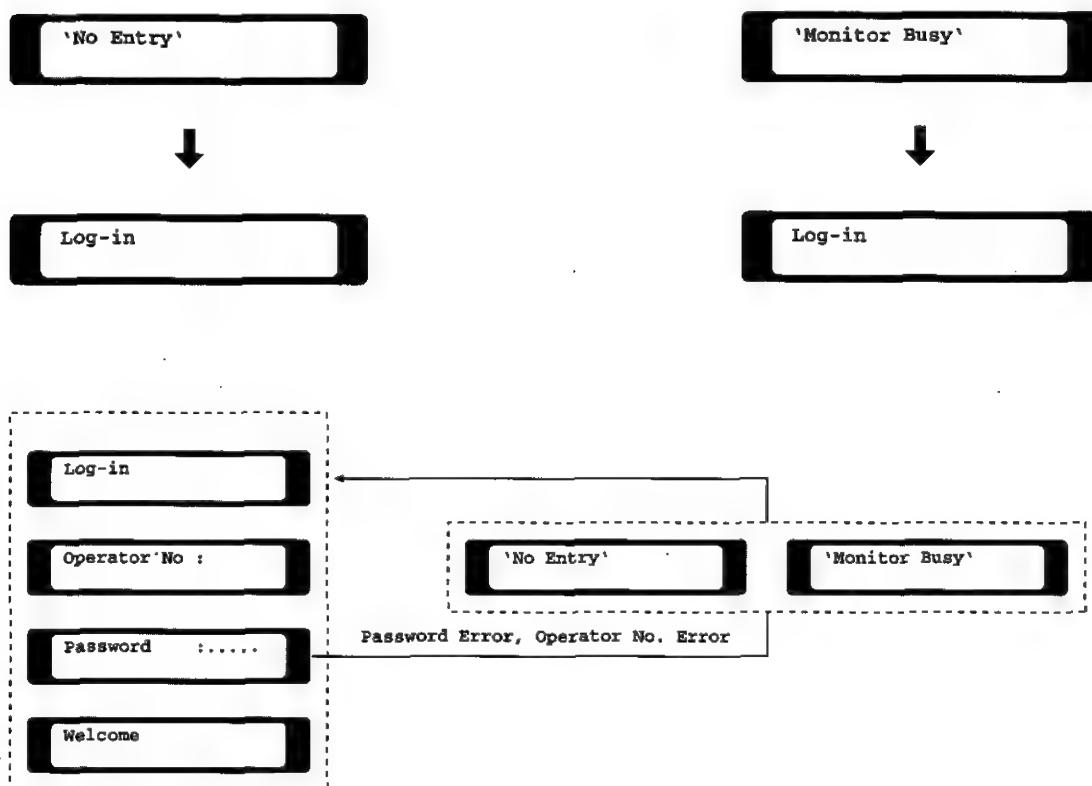
See page 83 for details on registering password numbers.

Note: If the Auto Log-in Setting is selected On mode, any operator can be Log-in automatically as an operator previously.

Refer to the Auto Log-in Setting on page 117.

If an Operator No. or Password error has occurred, a 'No entry' display appears on the LCD and the display automatically returns to the Log-in display.

'Monitor busy' will appear on the LCD when another controller, with a higher operator priority, is presently controlling the monitor outputs. The LCD display will automatically return to the Log-in display.

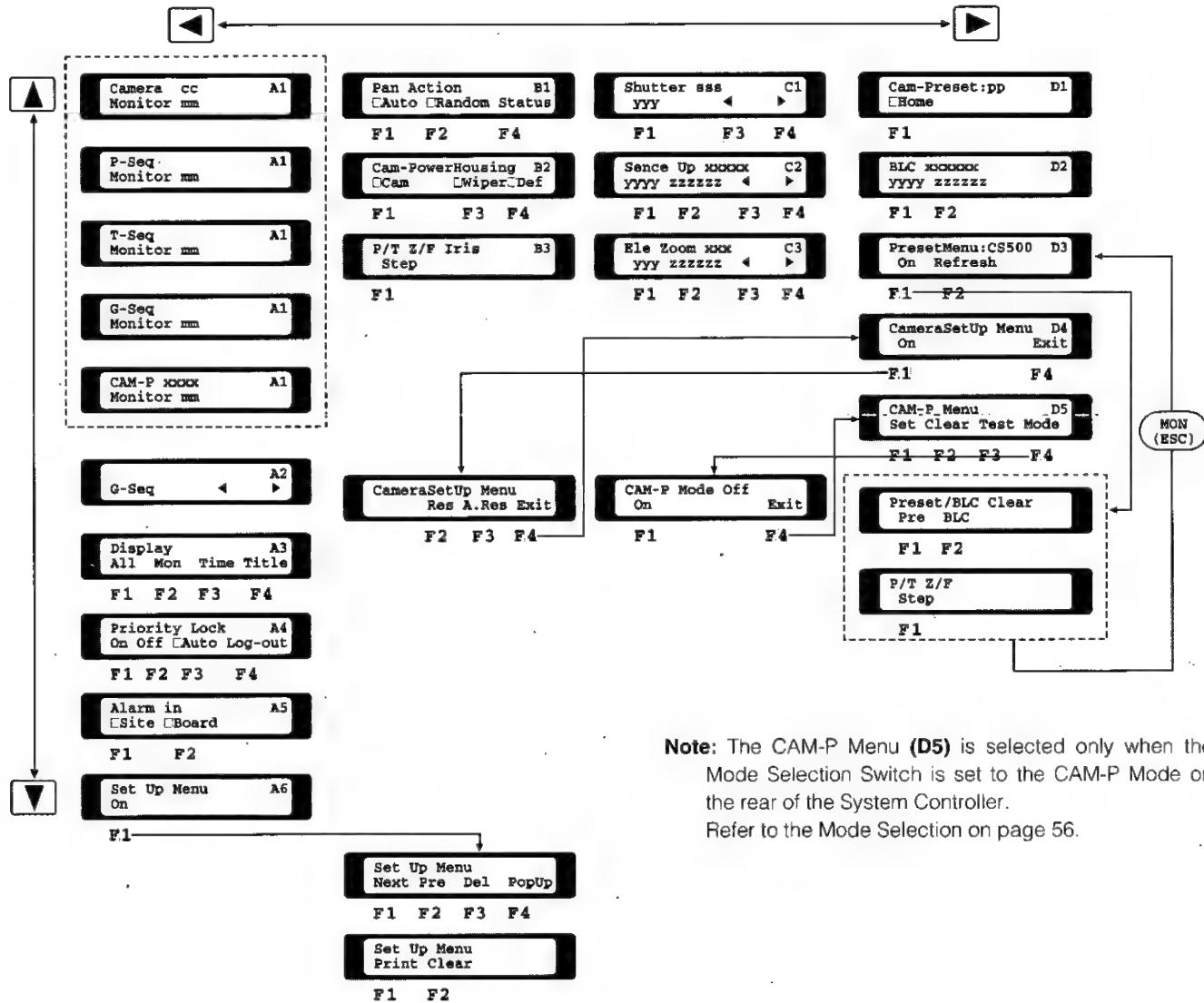


2. Operation Menus

After log-in, the following operation menus are available on the LCD by pressing the appropriate Cursor Keys. For example, to go from the CAMERA/MONITOR SELECTION MENU (**A1**) to the SHUTTER SELECTION MENU (**C1**) press the right Cursor Key twice. To go from the G-SEQ SELECTION MENU to the SET UP MENU, press the down Cursor Key four times. To actually set the SET UP Menu to the ACTIVE or ON position press the **F1** Key while the SET Up Menu is displayed in the LCD.

Notes:

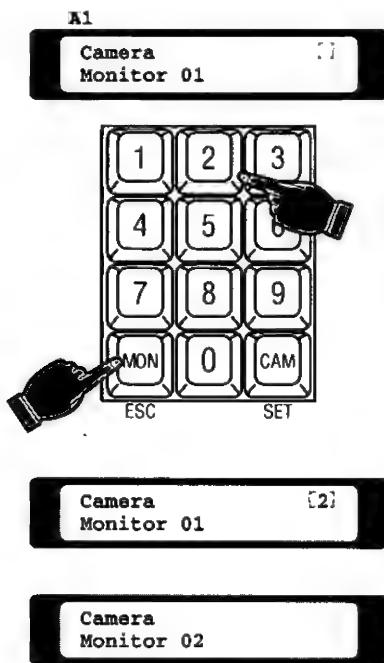
- By pressing the Left and the Right Cursor Keys simultaneously the LCD displays the top left display.
- The Menu Number (**A1** to **D5**) will be displayed on the upper right corner of the LCD for two seconds after selecting the menu by pressing the appropriate Cursor Keys.



Note: The CAM-P Menu (**D5**) is selected only when the Mode Selection Switch is set to the CAM-P Mode on the rear of the System Controller.
Refer to the Mode Selection on page 56.

3. Monitor Selection

Select the desired monitor by pressing the Numeric Keys, then press the Monitor (MON) Key.



Press the Increment (INC + 1 CAM) switch to replace the presently selected camera with the next higher camera number.



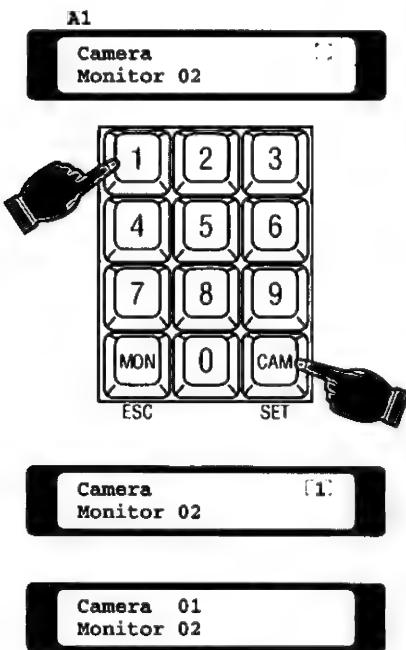
Press the Decrement (DEC -1 CAM) switch to replace the presently selected camera with the next lower camera number.



Note: If the CAM-P Mode is selected On mode, press the Function (F1) Key instead of the Monitor (MON) Key.

4. Camera Selection

Select the desired camera by pressing the Numeric Keys, then press the Camera (CAM) Key.



Note: The selected camera will be assigned to the currently selected monitor.

5. Contrast and Back Light Adjustment of LCD

By pressing the Cursor (\blacktriangleleft , \blacktriangleup , \blacktriangleright) Keys at the same time, the following display appears on the LCD.

Contrast BackLight
(Zoom) 90(Focus) 99

a) Contrast Adjustment

Press the Zoom (ZOOM TELE/WIDE) Control to adjust the contrast of the characters displayed on the LCD while pressing the Cursor (\blacktriangleleft , \blacktriangleup , \blacktriangleright) Keys at the same time.

TELE : increases the character contrast (00 \rightarrow 99)

WIDE : decreases the character contrast (99 \rightarrow 00)

b) Back Light Adjustment

Press the Focus (FOCUS NEAR/FAR) Control to adjust the back light of the LCD while pressing the Cursor (\blacktriangleleft , \blacktriangleup , \blacktriangleright) Keys at the same time.

NEAR: increases the back light brightness (00 \rightarrow 99)

FAR: decreases the back light brightness (99 \rightarrow 00)

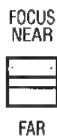
6. Controlling System Accessories

Controls for system accessories are located on the right side of the front panel of the System Controller. Included are Zoom Control, Focus Control, Iris Control, Preset and Pan/Tilt Controls. Normally, a WV-RC100 or WV-RC150 Receiver is required to perform these functions.

6-1 Lens Control

Confirm that the correctly specified lens, which has motorized zoom/focus functions, is mounted on the camera. Also confirm that the Lens Selection Switch (DC/VIDEO) on the camera is set to the DC position.

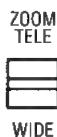
1. Select the desired camera and monitor. Refer to the Camera Selection and Monitor Selection on page 98.
2. Press the Focus (**FOCUS NEAR/FAR**) Control to adjust the lens focus to achieve a sharply focused picture while observing the monitor.



Press the Auto Focus (**AF**) Switch to adjust the lens focus automatically, when specified camera with the auto focus feature, such as the Panasonic WV-CS604, is used.



3. Press the Zoom (**ZOOM TELE/WIDE**) Control to adjust the lens zoom to achieve the desired picture while observing the monitor. Press this control to the TELE position to optically bring an object closer. Pressing to the WIDE position has the reverse effect.



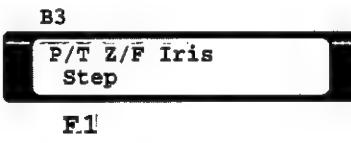
4. Press the Lens Iris (**IRIS CLOSE, OPEN**) Switches to close/open the lens iris. Adjust the lens iris by using the switches to obtain the proper picture exposure.



By pressing both of these switches at the same time for three seconds, the lens iris is set to the factory preset condition.

Note: When a camera, with an ALC Lens, has AGC turned on, the iris close, open function will operate move slowly. By pressing the above switches repeatedly (instead of holding down) this function will operate faster.

5. If Lens Control is needed fine adjustment, follow the procedures shown below.
 - 1) Select the desired camera and monitor.
 - 2) Select the P/T Z/F Iris (**B3**) Menu on the LCD by pressing the Cursor Keys.

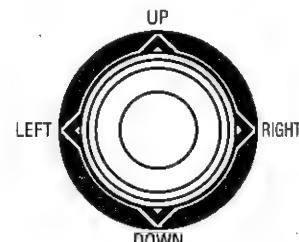


- 3) Press the Focus, Zoom or Iris Switch, while pressing the Function (**F1**) Key, to adjust fine.

Note: Press the Focus, Zoom or Iris Switch, while pressing the Stop (**STOP**) Switch, to adjust fine without displaying the P/T Z/F Iris Menu.

6-2 Pan/Tilt Control (Manual Operation)

1. Select the desired camera and monitor. Refer to the Camera Selection and Monitor Selection on page 98.
2. Press the Joystick Controller to move the Pan/Tilt Head towards the desired direction. If the joystick is positioned in between UP and RIGHT, the Pan/Tilt Head moves diagonally towards Up and Right. Eight directions are available: UP/DOWN/RIGHT/LEFT/UP-RIGHT/UP-LEFT/DOWN-RIGHT/DOWN-LEFT.

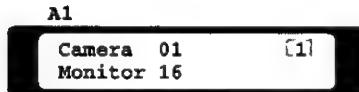
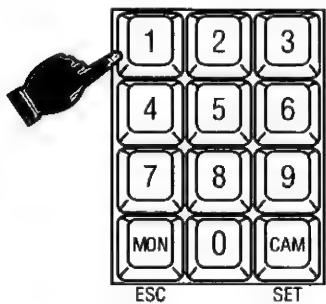


3. If Pan/Tilt Control is needed fine adjustment, press the Joystick Controller while pressing the Stop (**STOP**) Switch, to adjust fine.

6-3 Pan/Tilt Control (Preset Operation)

The following function is only available with cameras that have preset panning functions, such as the Panasonic WV-CS500 and WV-CS604.

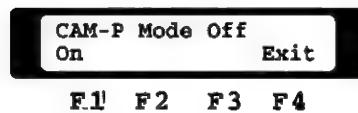
1. Select the desired camera and monitor.
Refer to Camera Selection and Monitor Selection on page 98.
2. Select the preset number by pressing the Numeric Keys.



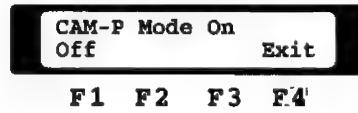
3. Press the Preset (**PRESET**) Switch to activate the Pan/Tilt Head to move to the preset position.



3. Press the Function (**F4**) Key to display the menu shown below.



4. Press the Function (**F1**) Key repeatedly to select the On mode.



Note: After selected On mode on the LCD by pressing the Function (**F1**) Key, the Monitor (**MON**) Key will be activated to execute the selection.

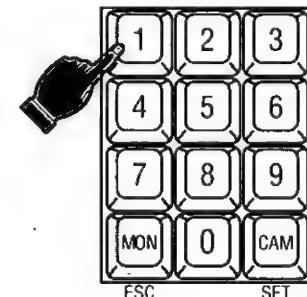
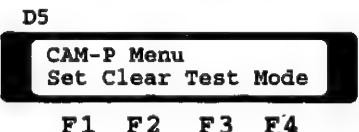
When selecting the monitor, press the Function (**F1**) Key instead of the Monitor (**MON**) Key while the Camera/Monitor Selection (**A1**) Menu is displayed on the LCD.

5. Press the Function (**F4**) Key to return to the CAM-P Menu.
6. Select the desired camera position number by pressing the Numeric Keys, then press the Monitor (**MON**) Key to activate the camera to move the preset position.

6-4 Pan/Tilt Control (Camera Position Operation)

The following function is available only when the Mode Selection Switch is selected at CAM-P Mode on the rear of the System Controller.

1. Select the desired monitor.
Refer to the Monitor Selection on page 98.
2. Select the CAM-P (**D5**) Menu on the LCD by pressing the Cursor Keys.



Note: If operating above functions, it is required to register the preset position number with the camera number.

Refer to the Mode Selection Switch Setting on page 56 and the Camera Position Number Setting on page 115 for more details.

6-5 Pan/Tilt Control (Auto/Random Panning)

The functions described below are available only when the specified Pan/Tilt Head is used.

MODEL	AUTO-PAN	RANDOM-1	RANDOM-2
WV-7220D	○	*○	*○
WV-7225	○	*○	*○
WV-CS404	○	Not available	Not available
WV-CS604	○	Not available	Not available
WV-BS204	○	Not available	○
WV-CS304	○	Not available	○
WV-CS500	○	○	○
WV-7230D	Not available	Not available	*○
WV-7260D	Not available	Not available	*○

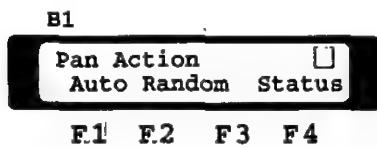
Notes:

*○: Function is available when the WV-RC100 or WV-RC150 Receiver is also used.

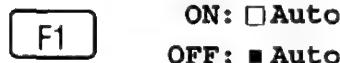
Random-1: Auto Panning Head pans for a predetermined time, "X" (set by the receiver), stops for 2X, continues in same direction for "X" period, unless Pan Limit Switch is closed, in which case unit will pan in reverse direction for remainder of X time.

Random-2: Panning direction and time is almost impossible to predict.

1. Select the desired camera and monitor.
Refer to the Camera Selection and Monitor Selection on page 98.
2. Select the Pan Action (**B1**) Menu on the LCD by pressing the Cursor Key.



3. Press the Function (**F1**) Key repeatedly to turn on or off the auto panning function.



Note: Press the Auxiliary (**AUX 2**) Switch, after pressing the Alternate (**ALT**) Switch, to activate the auto panning without selecting the Pan Action Menu.

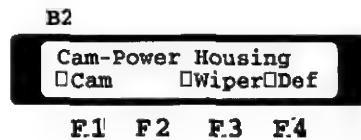
4. Press the Function (**F2**) Key repeatedly to turn on or off the random panning function.



6-6 Camera Power and Housing Control

For remote camera power operation, a 24V AC powered camera must be installed in the housing.

1. Select the desired camera and monitor.
Refer to the Camera Selection and Monitor Selection on page 98.
2. Select the Cam-Power and Housing (**B2**) Menu on the LCD by pressing the Cursor Keys.



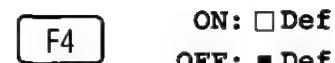
3. Press the Function (**F1**) Key repeatedly to turn on or off the camera power.



4. Press the Function (**F3**) Key repeatedly to turn on or off the housing wiper.



5. Press the Function (**F4**) Key repeatedly to turn on or off the housing defroster.



Caution

To prevent premature wearing of the wiper blades, be sure to turn off the wiper operation of a camera before selecting another camera for viewing.

7. Running a Sequence

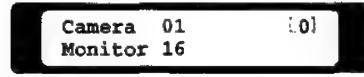
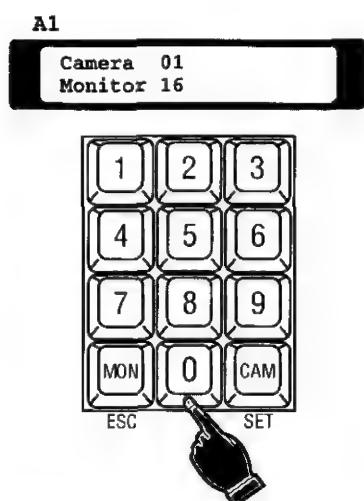
7-1 Program Sequence

The following functions are available only if a Program Sequence has been previously established for a particular monitor through the Set Up Menu. As described on page 69, the Program Sequence can display up to 128 cameras in a predetermined series on a selected monitor.

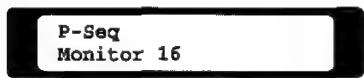
1. Select the desired monitor.

Refer to the Monitor Selection on page 98.

2. Press the Numeric Key 0.



3. Press the Forward Sequence (**FORWARD SEQ**) Switch to run the Program Sequence.



4. Press the Stop (**STOP**) Switch to stop the Program Sequence.



P-Seq Stop
Monitor 16

5. Press the Forward Sequence (**FORWARD SEQ**) Switch to continue a sequence that was previously stopped by the Stop (**STOP**) Switch. The sequence will continue in the forward direction from the step that was selected at the time the Stop Switch was pressed.



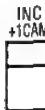
P-Seq
Monitor 16

6. Press the Backward Sequence (**BACK SEQ**) Switch to continue a sequence that was previously stopped by the Stop (**STOP**) Switch. The sequence will continue in the reverse direction from the step that was selected at the time the Stop Switch was pressed.



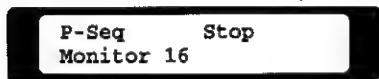
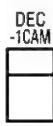
P-Seq
Monitor 16

7. Press the Increment (**INC + 1CAM**) Switch to move a sequence one step forward from the step that was previously stopped by the Stop (**STOP**) Switch.

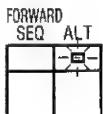


P-Seq Stop
Monitor 16

8. Press the Decrement (**DEC - 1CAM**) Switch to move a sequence one step backward from the step that was previously stopped by the Stop (**STOP**) Switch.

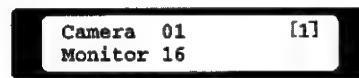
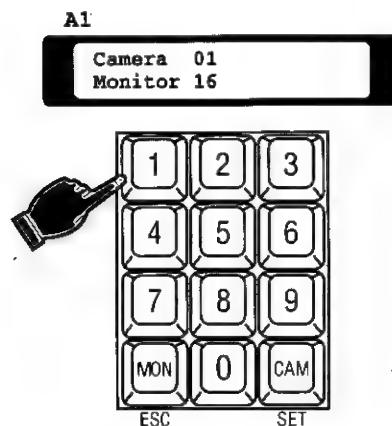


9. Press the Forward Sequence (**FORWARD SEQ**) Switch, after pressing the Alternate (**ALT**) Switch, to start the Program Sequence from the beginning of the sequence pattern that was previously stopped by the Stop (**STOP**) Switch.

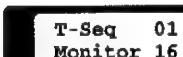


10. To cancel the Program Sequence select a camera. Refer to the Camera Selection on page 98.

2. Select the desired Tour Sequence number by pressing the Numeric Keys.



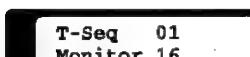
3. Press the Forward Sequence (**Forward SEQ**) Switch to run the Tour Sequence.



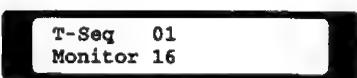
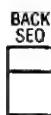
4. Press the Stop (**STOP**) Switch to stop the Tour Sequence.



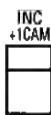
5. Press the Forward Sequence (**FORWARD SEQ**) Switch to continue a sequence that was previously stopped by the Stop (**STOP**) Switch. The sequence will continue in the forward direction from the step that was selected at the time the Stop Switch was pressed.



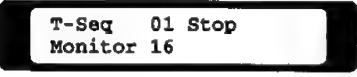
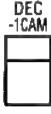
6. Press the Backward Sequence (**BACK SEQ**) Switch to continue a sequence that was previously stopped by the Stop (**STOP**) Switch. The sequence will continue in the reverse direction from the step that was selected at the time the Stop Switch was pressed.



7. Press the Increment (**INC + 1CAM**) Switch to move a sequence one step forward from the step that was previously stopped by the Stop (**STOP**) Switch.



8. Press the Decrement (**DEC - 1CAM**) Switch to move a sequence one step backward from the step that was previously stopped by the Stop (**STOP**) Switch.



9. Press the Forward Sequence (**FORWARD SEQ**) Switch, after pressing the Alternate (**ALT**) Switch, to start the Tour Sequence from the beginning of the sequence pattern that was previously stopped by the Stop (**STOP**) Switch.

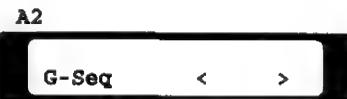


10. To cancel the Tour Sequence select a camera. Refer to the Camera Selection on page 98.

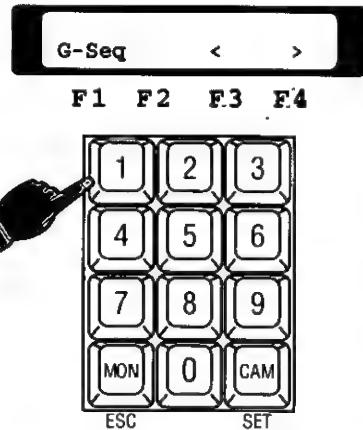
7-3 Group Sequence

The following functions are available only if a Group Sequence has been previously established through the Set Up Menu. As described on page 71, up to 8 Group Sequences can be set up.

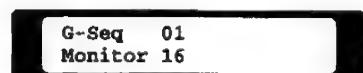
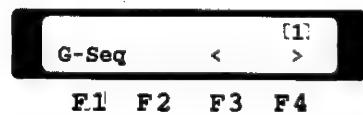
1. As described earlier, the Group Sequence determines which monitor is to be connected with which camera. Therefore, selecting a monitor is not required.
2. Select G-Seq (**A2**) Menu on the LCD by pressing the Cursor Keys.



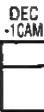
3. Select the desired Group Sequence number by pressing the Function Keys (**F3/F4**) or the Numeric Keys.



4. Press the Function (**F1**) Key to run the selected Group Sequence.



5. Press the Stop (**STOP**) Switch to stop the Group Sequence.



G-Seq 01 Stop
Monitor 16

6. Press the Forward Sequence (**FORWARD SEQ**) Switch to continue a sequence that was previously stopped by the Stop (**STOP**) Switch. The sequence will continue in the forward direction from the step that was selected at the time the Stop Switch was pressed.



G-Seq 01
Monitor 16

7. Press the Backward Sequence (**BACK SEQ**) Switch to continue a sequence that was previously stopped by the Stop (**STOP**) Switch. The sequence will continue in the reverse direction from the step that was selected at the time the Stop Switch was pressed.



G-Seq 01
Monitor 16

8. Press the Increment (**INC + 1CAM**) Switch to move a sequence one step forward from the step that was previously stopped by Stop (**STOP**) Switch.



G-Seq 01 Stop
Monitor 16

9. Press the Decrement (**DEC - 1CAM**) Switch to move a sequence one step backward from the step that was previously stopped by Stop (**STOP**) Switch.

10. Press the Forward Sequence (**FORWARD SEQ**) Switch, after pressing the Alternate (**ALT**) Switch, to start the Group Sequence from the beginning of the sequence pattern that was previously stopped by the Stop (**STOP**) Switch.

G-Seq 01 Stop
Monitor 16



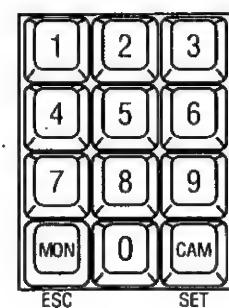
11. To cancel the Group Sequence select a camera. Refer to the Camera Selection on page 98.

8. Displaying Playback Video

If connected the VCR's Video Output to the Monitor Input (**MONITOR IN**) Connector on the WV-PB5504A Video Output Board, the VCR's video is displayed on the monitor by following procedures.

When selected this function, the Camera Title, Data, and Time are not displayed on the monitor.

1. Select the monitor that is connected to the Monitor Output (**MONITOR OUT**) Connector systemized with the connected VCR's Monitor Input (**MONITOR IN**) Connector. Refer to the Monitor Selection on page 98.
2. Press the Alternate (**ALT**) Switch then press the Monitor (**MON**) Key. The picture on the monitor will be switched to the video, that is connected on the Video Output Board, and displayed "in" shown below on the LCD.



A1

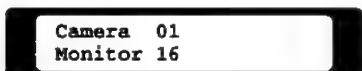
Camera 01
Monitor 01 [in]

3. Press the Alternate (**ALT**) Switch again to return to the original picture.

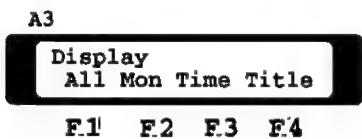
9. Title Display

1. Select the desired camera and monitor.

Refer to the Camera and Monitor Selection on page 98.



2. Press the Cursor Key (▼) twice to select the Display (A3) Menu on the LCD.



5. Press the Function (F3) Key repeatedly to display or erase the date and time from the monitor.

F3

MAY, 07 '96 14:23:56

C 01 M16 3rd Floor
Pr64 Sp Room 306

6. Press the Function (F4) Key repeatedly to display or erase the title.

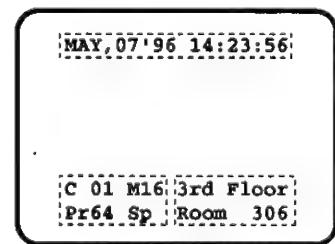
F4

MAY, 07 '96 14:23:56

C 01 M16 3rd Floor
Pr64 Sp Room 306

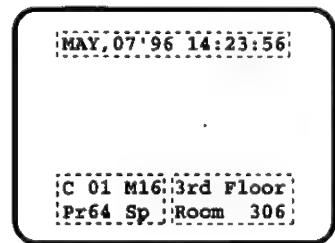
3. Press the Function (F1) Key repeatedly to display or erase all items from the monitor.

F1



4. Press the Function (F2) Key repeatedly to display or erase the monitor status from the monitor.

F2

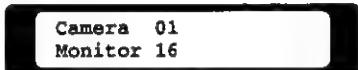


10. Camera Operation

10-1 Electronic Shutter Mode

The following function is available only when specified cameras with the electronic shutter feature are used.

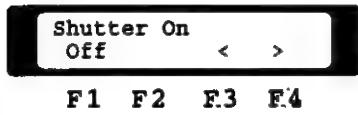
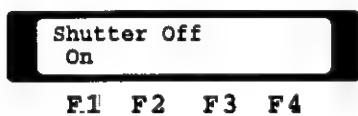
1. Select the desired camera and monitor.
Refer to the Camera Selection and Monitor Selection on page 98.



2. Select the Shutter (C1) Menu on the LCD by pressing the appropriate Cursor keys.



3. Press the Function (F1) Key to select the electronic shutter mode. Press the Function (F3) Key to select slower shutter speeds or press the Function (F4) Key to select faster shutter speeds.

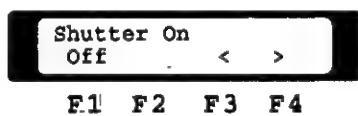


F3: 1/10,000 → 1/4,000 → 1/2,000 → 1/1,000 → 1/500
→ 1/250 → 1/100

F4: 1/100 → 1/200 → 1/400 → 1/1,000 → 1/2,000 →
→ 1/4,000 → 1/10,000

Note: The selected shutter speed differs by the selected camera.

4. Press the Function (F1) Key to turn off the electronic shutter mode.



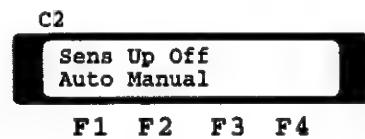
10-2 Electronic Sensitivity Up Mode

The following function is available only when specified cameras with the electronic sensitivity feature are used.

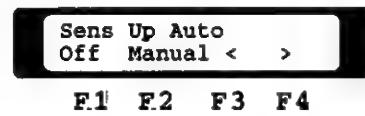
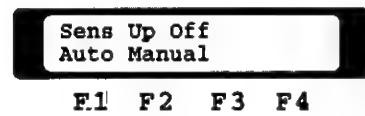
1. Select the desired camera and monitor.
Refer to the Camera Selection and Monitor Selection on page 98.



2. Select the Sens Up (C2) Menu on the LCD by pressing the appropriate Cursor keys.

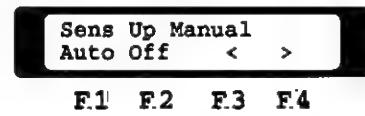
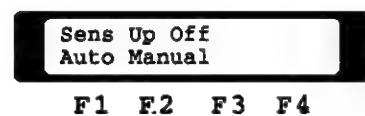


3. Press the Function (F1) Key to select the Auto Sensitivity Up Mode.



Press the Function (F1) Key to turn off the auto sensitivity up mode or press the Function (F2) Key to select the Manual Sensitivity Up Mode.

4. Press the Function (F2) Key to select the Manual Sensitivity Up Mode.



Press the Function (**F3**) Key to select a lower sensitivity up setting or press the Function (**F4**) Key to select a higher sensitivity up setting.

F3: X10 → X6 → X4 → X2 → X1
 F4: X1 → X2 → X4 → X6 → X10

Note: The selected sensitivity up differs by the selected camera.

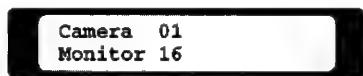
Press the Function (**F1**) Key to select the Auto Sensitivity Up Mode or press the Function (**F2**) Key to turn off the sensitivity up mode.

10-3 Electronic Zoom Mode

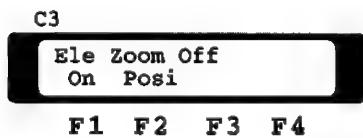
The following function is available only when specified cameras with the electronic zoom feature are used.

a) Selecting an Area after Zooming Procedures:

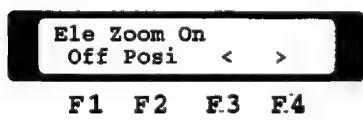
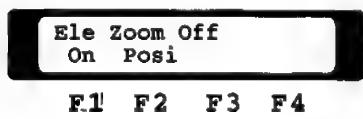
1. Select the desired camera and monitor.
 Refer to the Camera Selection and Monitor Selection on page 98.



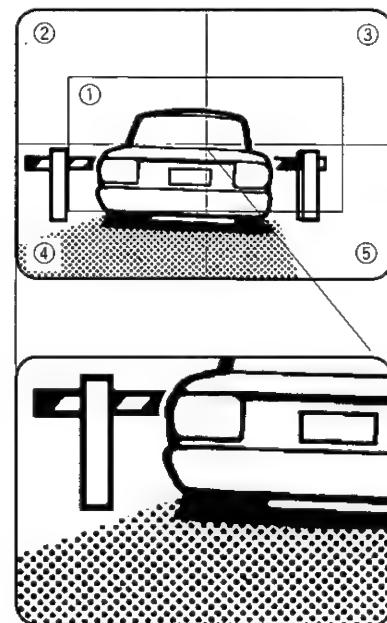
2. Select the Ele Zoom (**C3**) Menu on the LCD by pressing the appropriate Cursor Keys.



3. Press the Function (**F1**) Key to select the Electronic Zoom Mode. A Zoomed picture appears on the monitor. The area shown is the area that was last selected.

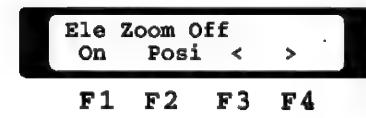
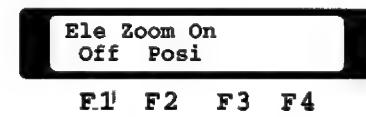


4. Press the Function (**F3 or F4**) Key repeatedly to select the desired zoomed area. The zoomed area is switched over as shown in the following table.



Key No.	Selected Area
F3	⑤ → ④ → ③ → ② → ①
F4	① → ② → ③ → ④ → ⑤

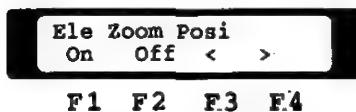
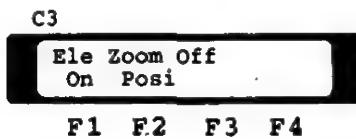
5. Press the Function (**F1**) Key to turn off the Electronic Zoom Mode.



b) Selecting Area before Zooming Procedures:

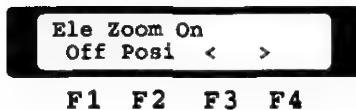
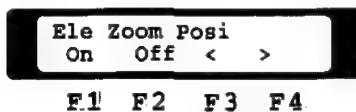
1. Select the desired camera and monitor.
 Refer to the Camera Selection and Monitor Selection on page 98.
2. Select the Ele Zoom (**C3**) Menu on the LCD by pressing the appropriate Cursor Keys.

3. Press the Function (**F2**) Key to select the Zooming Position Mode.

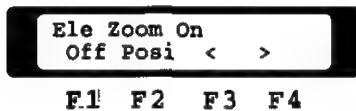


4. Press the Function (**F3 or F4**) Key repeatedly to select the desired zooming area. The emphasized area is switched over on the monitor as shown in the previous table.

5. Press the Function (**F1**) Key to select the Electronic Zoom Mode. A zoomed picture appears on the monitor with the area that was selected in step 4 above.



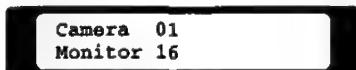
6. Press the Function (**F1**) Key to turn off the Electronic Zoom Mode.



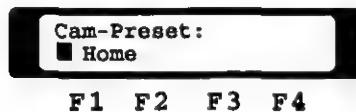
10-4 Home Position Selection

The following function is available only when specified cameras with the preset feature, such as the Panasonic WV-CS500 or WV-CS604, are used.

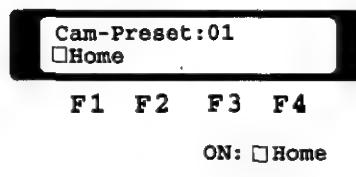
1. Select the desired camera and monitor.
Refer to the Camera Selection and Monitor Selection on page 98.



2. Select the Cam-Preset (**D1**) Menu on the LCD by pressing the appropriate Cursor Keys.



3. Press the Function (**F1**) Key to activate the camera to move the Home Position

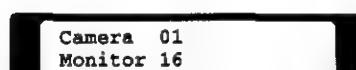


Note: Press the Auxiliary (**AUX 1**) Switch, after pressing the Alternate (**ALT**) Switch, to activate the home position function without selecting the Cam-Preset Menu.

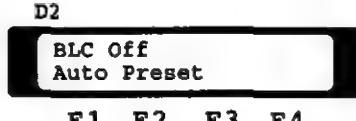
10-5 Back Light Compensation (BLC) Mode

The following function is available only when specified cameras with the Auto/Preset BLC Function are used.

1. Select the desired camera and monitor.
Refer to the Camera Selection and Monitor Selection on page 98.



2. Select the BLC (**D2**) Menu on the LCD by pressing appropriate Cursor Keys.

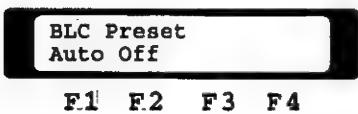
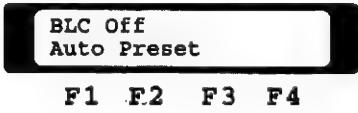


3. Press the Function (**F1**) Key to select the Auto BLC Mode.



Press the Function (**F1**) Key to turn off the Auto BLC Mode or press the Function (**F2**) Key to select the Preset BLC Mode.

4. Press the Function (**F2**) Key to select the Preset BLC Mode.

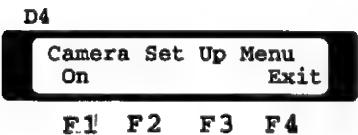


6
Press the Function (**F2**) Key to turn off the Preset BLC Mode or press the Function (**F1**) Key to select the Auto BLC Mode.

10-6 Camera Set Up

The following functions are only available with cameras that have set up functions such as the Panasonic WV-CP610 or WV-BP510 series, WV-CS604 or WV-CS404 cameras.

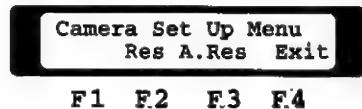
1. Select the desired camera and monitor.
Refer to the Camera Selection and Monitor Selection on page 98.
2. Select the Camera Set up (**D4**) Menu on the LCD by pressing the appropriate Cursor Keys.



Note: The default setting is set up on. Pressing the Function (**F1**) Key at this point will allow access to the Camera Set up menu if such access is authorized by the operator's level. If **PROHIBITED** appears on the LCD, press the Escape (**ESC**) Key to return the Camera Set up menu display.

3. Press the Function (**F1**) Key to gain access to the Camera Set Up Menu.

The menu now appears on the selected monitor.
For example, the WV-CP610 series cameras are displayed as shown below.



** SET UP **	
CAMERA ID	OFF
ALC/ELC	ALC
SHUTTER	OFF
AGC	ON
SENSE UP	OFF
SYNC	INT
WHITE BAL	ATW
WIDE D-RANGE	OFF
MOTION DET	OFF
DNR	OFF
END	SET UP ENABLE

4. Select the desired item by moving the Joystick Controller UP and DOWN and then select the desired mode by moving the Joystick Controller LEFT and RIGHT.

Press the Set (**SET**) Key to execute the setting or entering sub menu, and press the Escape (**ESC**) Key to escape from the setup mode or menu.

5. Press the Function (**F2**) Key to reset the selected menu and press the Function (**F3**) Key to reset all settings to initial state.

Note

Refer to the Operating Instructions of the selected camera for more details.

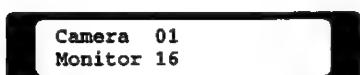
6. Press the Function (**F4**) Key to return to the original screen.

Caution: If camera setup is started with switches on the back of the camera, all settings must be made with the switches on the camera's rear panel.

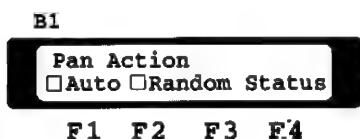
If camera setup is started with a Matrix Switcher, all settings must be made with the Matrix Switcher. Then, exit.

11. Camera Status Display

1. Select the desired camera and monitor.
Refer to the Camera Selection and Monitor Selection on page 98.

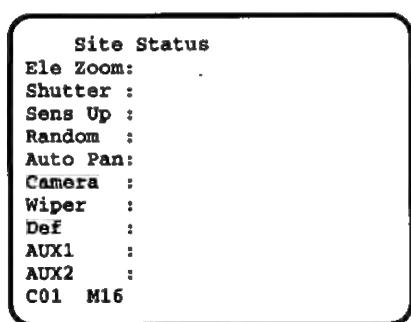


2. Select the Pan Action (B1) Menu on the LCD by pressing the appropriate Cursor Keys.



F1 F2 F3 F4

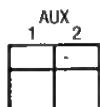
3. Press the Function (F4) Key repeatedly to display or erase the camera status as shown below.



12. Auxiliary Control

The following function is available only when WV-RC100 or WV-RC150 Receivers are included in the system.

1. Select the desired camera and monitor.
Refer to the Camera Selection and Monitor Selection on page 98.
2. Press the Auxiliary (AUX 1 or 2) Switch repeatedly to turn on or off the user's auxiliary switch in the Receiver (WV-RC100 or WV-RC150).



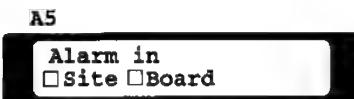
13. Alarm Control

13-1 Alarm Input Selection

The following function is used to change the alarm input selection by the System Controller After making the Alarm Mode Select setting in the Setup Menu.

The selected mode is automatically stored in the Setup Menu after turning power off of the Matrix Switcher.

1. Select the Alarm in (A5) Menu on the LCD by pressing the appropriate Cursor Keys.



F1 F2

2. Press the Function (F1) Key repeatedly to select the alarm input On or Off from the camera site.
Press the Function (F2) Key repeatedly to select the alarm input On or Off from the Alarm Board.

: On
 : Off

13-2 Alarm Operation

When an alarm sensor unit is activated, the Alarm Indicator (ALARM) blinks. The indicator keeps blinking until all alarms are cleared by pressing the Alarm Acknowledge and Reset (ACK RESET) Switch.

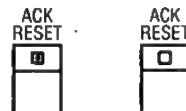
ALARM LED



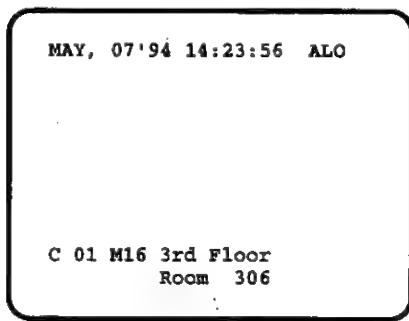
13-3 To Cancel Alarm (Single Monitor)

The alarmed monitor(s) must first be selected. Press the Alarm Acknowledge and Reset (ACK RESET) Switch once for alarm acknowledgement. The LED indicator on the switch blinks rapidly.

Press the Alarm Acknowledge and Reset (ACK RESET) Switch once again for alarm reset. The LED indicator light turns off.



Note: "AL0" or "AL1" is displayed on the upper right corner of the alarmed monitor.



13-4 To Cancel Alarm (Plural Monitors)

The following function is used to cancel alarm in a lump when activating the Alarm Mode 1 or 2.

1. Select the alarmed monitor.
Select monitor 1 on activating the Alarm Mode 1 or select one of monitors 1 - 4 on activating the Alarm Mode 2.
2. Press the Alternate (**ALT**) Switch to light up the LED indicator on the switch.
3. Press the Alarm Acknowledge and Reset (**ACK RESET**) Switch once for alarm acknowledgement. The LED indicator on the switch blinks rapidly.
4. Press the Alarm Acknowledge and Reset (**ACK RESET**) Switch once again for alarm reset. The LED indicator light turns off.



Note: Select one of the monitors, that is activated the Group Sequence by motivating the Alarm Mode 3, then follow the steps above to cancel the alarmed monitors at once.

14. Preset Setting (WV-CS500 Only)

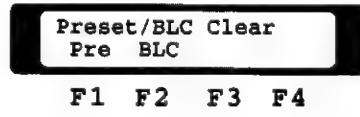
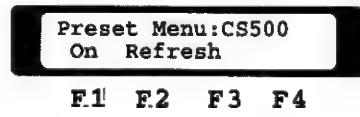
The following function is only available with the cameras that have preset panning functions, such as the Panasonic WV-CS500.

14-1 Preset Menu Setting

1. Select the desired camera and monitor.
Refer to the Camera Selection and Monitor Selection on page 98.
2. Select the Preset (**D3**) Menu on the LCD by pressing the appropriate Cursor Keys.



3. Press the Function (**F1**) Key to select the Preset Program Mode.
The Preset Program Menu appears on the selected monitor.
Refer to the Preset Program Menu shown on next page.

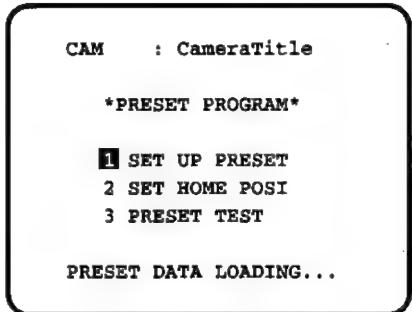


Press the Function (**F2**) Key to select the Refresh Mode.
The selected camera has its PAN/TILT/ZOOM/FOCUS functions automatically activated.

Note: Use the refresh mode if the preset positions become slightly different from the initially set positions.

14-2 Preset Program Menu

As shown below, the Preset Program Menu has three sub menus: SET UP PRESET, SET HOME POSI (Position), and PRESET TEST.



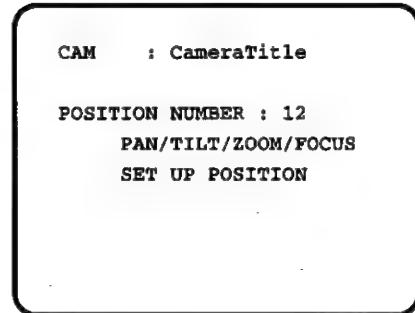
The items on the menu are used to as shown below.

1. SET UP PRESET
Sets up the preset position or preset BLC (Back Light Compensation) for the camera.
2. SET HOME POSI
Sets up the Home Position for the camera
3. PRESET TEST
Tests the selected all preset positions.

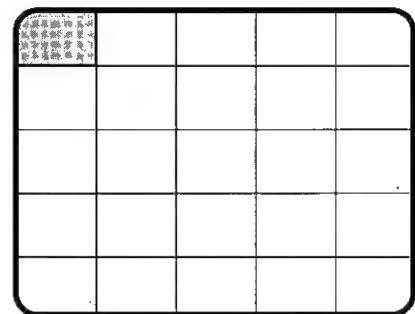
To select item from the **Preset Program Menu**:

1. Move the cursor to the desired item by moving the Joystick Controller.
2. Press the Set (**SET**) Key to execute the selection. The selected item appears on the monitor.
3. Press the Escape (**ESC**) Key to return to the original screen without changing any settings.

1. Move the cursor to the desired preset number by moving the Joystick Controller.
2. Press the Set (**SET**) Key, the Preset Position Setting table appears on the monitor.

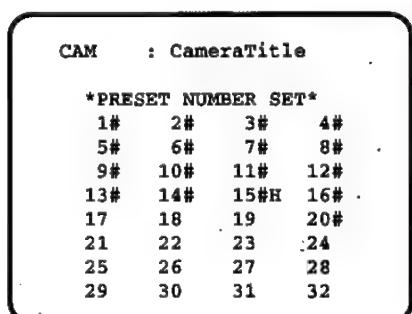


3. Set the desired preset position by moving the Joystick Controller, and adjust the zoom and focus by pressing the Zoom (**ZOOM TELE/WIDE**) Control and Focus (**FOCUS NEAR/FAR**) Control.
4. When satisfied with the position press the Set (**SET**) Key. The Preset BLC (Back Light Compensation) Setting table appears on the monitor.



14-3 Setting Up Preset Position

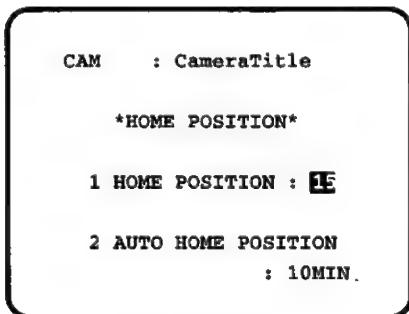
After selecting the SET UP PRESET sub menu, a table titled PRESET NUMBER SET appears on the monitor.



5. Move the cursor to the desired position by moving the Joystick Controller.
6. Press the Increment (**INC**) Switch or Decrement (**DEC**) Switch to select MASK ON or OFF.
7. Repeat the above procedures until the desired MASK setting is completed.
8. Press the Set (**SET**) key to execute the setting. The screen returns to the PRESET NUMBER SET table.
9. Press the Escape (**ESC**) Key to return to the Preset Program Menu.

14-4. Home Position Setting

After selecting the SET HOME POSI sub menu, a table titled HOME POSITION, appears on the monitor.

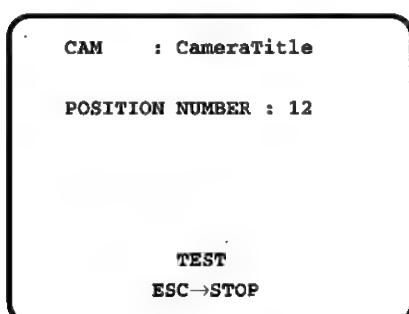


1. Move the cursor to the HOME POSITION by moving the Joystick Controller, and enter the desired position number by pressing the Numeric Keys.
2. Move the cursor to the AUTO HOME POSITION by moving the Joystick Controller, and select either mode Off or a desired time by pressing the Increment (INC) Switch or Decrement (DEC) Switch.
3. Press the Set (SET) Key to execute the selection, and to return to the Preset Program Menu.

Note: The auto home position function, when enabled, will return the camera to the designated home position automatically after a predetermined period of time.

14-5. Preset Test Mode

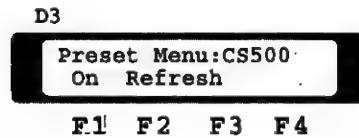
After selecting the PRESET TEST sub menu, the following screen appears on the monitor.



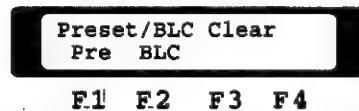
1. Press the Set (SET) Key to activate the test mode, the selected camera goes to all preset positions, starting from the lowest preset number to the highest preset number. The above function will automatically stop after ten minutes.
2. Press the Escape (ESC) Key to stop the preset test mode.
3. Press the Escape (ESC) Key again to return to the Preset Program Menu.

14-6 Clear the Preset Settings

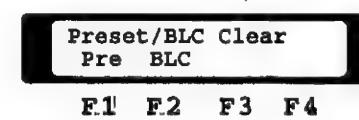
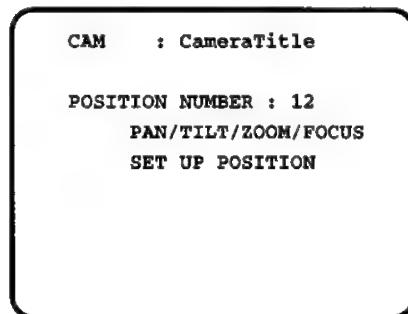
1. Select the desired camera and monitor. Refer to the Camera Selection and Monitor Selection on page 98.
2. Select the Preset (D3) Menu on the LCD by pressing the appropriate Cursor Keys.



3. Press the Function (F1) Key to select the Preset Program Mode. The Preset Program Menu appears on the selected monitor and selected menu as shown below on the LCD.



4. Move the cursor to "SET UP PRESET" by moving the Joystick Controller, then press the Set (SET) Key to select a table titled "PRESET NUMBER SET" on the monitor.
5. Move the cursor to the desired preset number by moving the Joystick Controller, then press the Set (SET) Key to select the Preset Position Setting table as shown below.



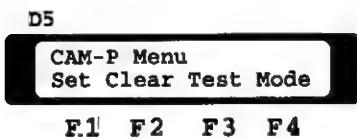
6. Press the Function (F1) Key to clear the preset settings on the selected preset number. If only clear the BLC setting, press the Set (SET) Key to select the Preset BLC Setting table, then press the Function (F2) Key instead of step 6.

15. Camera Position Number Setting

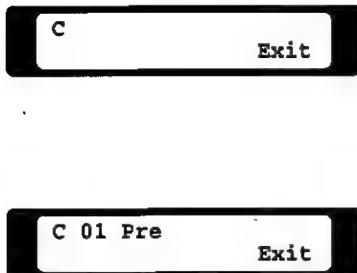
The following function is available only when the Mode Selection Switch is selected at CAM-P Mode on the rear of the System Controller.
Refer to the Mode Selection on page 56.

15-1 Register Camera Position Number

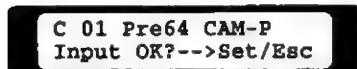
1. Select the desired monitor.
Refer to the Monitor Selection on page 98.
2. Select the CAM-P (D5) Menue as shown below on the LCD by pressing the appropriate Cursor Keys.



3. Press the Function (F1) Key to display shown below on the LCD.
Enter the camera number by pressing the Numeric keys, then press the Set (SET) Key.



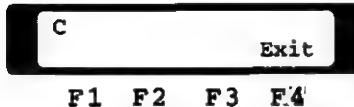
4. Enter the preset position number by pressing the Numeric Keys, then press the Set (SET) Key. The selected camera preset position picture appears on the monitor and displays on the LCD as shown below.



5. Enter the Camera Position Number by pressing the Numeric Keys.

When completed above steps, press the Set (SET) Key to execute the selection.

If made mistake on the above steps, press the Escape (ESC) Key to cancel the selection.

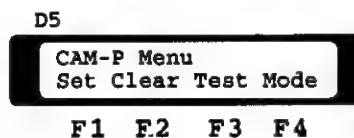


Note: Up to 1,000 positions are registered in this menu. "Data Full" display will be appeared on the LCD by registering over 1,000 positions.

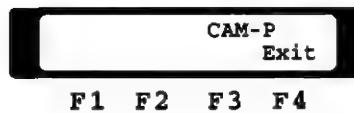
6. Repeat the above steps for other camera positions.
When satisfied with all positions, press the Function (F4) Key to exit from the programming mode.

15-2 Delete Camera Position Number

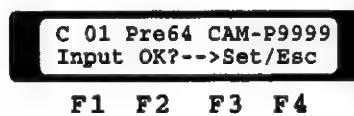
1. Select the desired monitor.
Refer to the Monitor Selection on page 98.
2. Select the CAM-P (D5) Menue as shown below on the LCD by pressing the appropriate Cursor Keys.



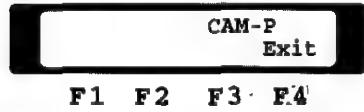
3. Press the Function (F2) Key to display shown below on the LCD.



4. Enter the camera position number for deleting by pressing the Numeric keys, then press the Set (SET) Key. The selected camera position picture appears on the monitor and displays on the LCD shown below.

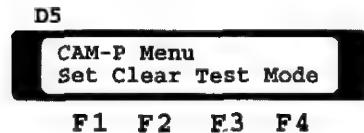


5. Confirm the display on the LCD, then press the Set **(SET)** Key to delete the selected Camera Position Number.
If made mistake on the above steps, press the Escape **(ESC)** Key to cancel the selection.
6. Repeat the above steps for other camera position numbers.
When satisfied with all positions, press the Function **(F4)** Key to exit from the programming mode.

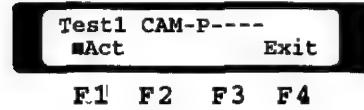


15-3 Camera Position Test Mode

1. Select the desired monitor.
Refer to the Monitor Selection on page 98.
2. Select the CAM-P **(D5)** Menue as shown below on the LCD by pressing the appropriate Cursor Keys.



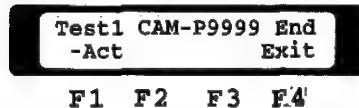
3. Press the Function **(F3)** Key to display shown below on the LCD.



4. Press the Function **(F1)** Key to activate the test mode, the selected camera position picture appears on the monitor at intervals of 3 seconds, starting from the lowest camera position number to the highest camera position number.
Press the Function **(F1)** key repeatedly to select the mode On or Off as shown below.

□: On
■: Off

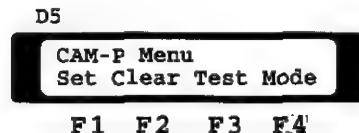
5. The above function will automatically stop and displays on the LCD shown below
Press the Function **(F4)** Key to return to the previous Camera Position Menu.



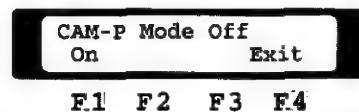
15-4 Camera Position Mode Selection

It is available only the camera position number operation when the camera position mode is selected at On mode.

1. Select the CAM-P **(D5)** Menue shown below on the LCD by pressing the appropriate Cursor Keys.



3. Press the Function **(F4)** Key to display shown below on the LCD.



Press the Function **(F1)** Key repeatedly to select the mode On or Off.

4. Press the Function **(F4)** Key to return to the previous CAM-P Menu.

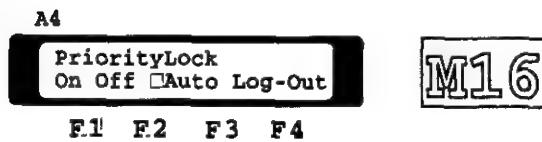
Note: The Monitor **(MON)** Key will be activated as the Camera Position Set Key when the CAM-P Mode is selected at On mode.

If selecting the monitor, enter the desired number by pressing the Numeric Keys then press the Function **(F1)** Key instead of the Monitor **(MON)** Key, while the Monitor Selection **(A1)** Menu is displayed.

16. Priority Lock

This function is used to retain control of a monitor by an operator, even after that operator has selected another monitor or has logged out.

1. Select the Priority Lock (**A4**) Menu on the LCD by pressing the appropriate Cursor Keys.
2. Press the Function (**F1**) Key to select the Priority Lock mode. The monitor number is inversely displayed on the selected monitor, as shown below.



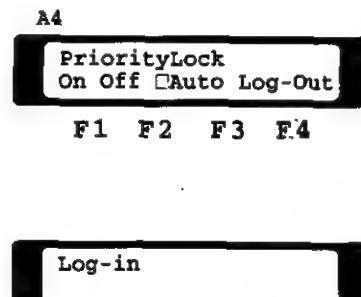
3. Press the Function (**F2**) Key to release the priority lock, the monitor number is displayed normally on the monitor.

Note: This function will prevent operators with a lower priority from gaining control of a monitor. However, higher priority operators may still gain control of that monitor.

17. Log-Out

This function is used when an operator is leaving the controller, or no longer requires access to the system. Controlling any functions from this controller is restricted until an operator logs in.

1. Select the Log-Out (**A4**) Menu by pressing the appropriate Cursor Keys.
2. Press the Function (**F4**) Key to log out. The LCD display shows the Log-in Display.

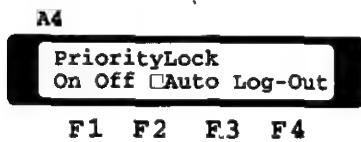


• Auto Log-in Setting

If an operator was made the Auto Log-in setting to On mode before Log-Out, any operator can be Log-in automatically and control as an operator previously.

Select either mode On or Off to meet the systems.

1. Select the Log-Out (**A4**) Menu by pressing the appropriate Cursor Keys.



2. Press the Function (**F3**) Key repeatedly to select Auto Log-in mode On or Off.

On: Auto
Off: Auto

TROUBLESHOOTING

TROUBLESHOOTING

A majority of the problems encountered in operating a matrix switcher can be traced to incorrect hardware or software setup. Therefore, please read this section to see if your problem has a simple solution before requesting service.

1. Initialization Problems

Symptom: Matrix Switcher will not power up.

1. Check the power cord connection with the AC outlet.
2. Check the fuse, located in the fuse holder in the rear of the WJ-SX550A Matrix Switcher.

Symptom: System Controller(s) will not power up.

1. Check the power cord connection with the AC outlet.
2. Check that the ON/OFF switch, located in the rear of the WV-CU550A System Controller, is turned on.

Symptom: System Controller(s) will not log-in.

1. Ensure that the System Controller(s) is plugged into the correct ports on the Control Board of the WJ-SX550A Matrix Switcher. The two ports labeled "Test" do not support System Controller inputs.
2. If not using the factory supplied data cable assembly, make sure that the distance from the Control Board to the System Controller does not exceed the maximum recommended distance. Check that the proper grade of data cable is installed. Also, check that the correct wiring sequences are maintained at all cable splices, junctions and connectors.

2. Operational Problems

Symptom: Video from a specific camera cannot be displayed on a specific monitor.

1. If the camera cannot be displayed on any monitor, check the Operator Registration table and make sure that the operator is authorized access to the camera in question.
2. If a monitor cannot have any camera selected, check the Controller Table and make sure that controller can control the output of the monitor.
3. Check if the monitor has a Priority Lock set by another operator.
4. If the camera can be displayed on another monitor there may be a problem with the Video Output Board, call qualified service personnel.

Symptom: No Pan/Tilt/Zoom control of a camera.

1. If the prompt field "PROHIBITED" appears on the LCD of the System Controller this indicates that the operator is not authorized access to the Pan/Tilt/Zoom functions for that camera. If needed, change the Operator Registration table programming for that operator.

Symptom: Can't run a Program Sequence.

1. Check that the level of the operator allows access to running a Program Sequence.
2. Make sure that a Program Sequence has been programmed to run on that monitor.

Symptom: Camera does not reach the designated preset position and the preset number is not displayed on the monitor, even though the preset position setting is specified in the Tour or Group Sequence programming.

1. The programmed Dwell Time in the Tour or Group Sequence is not sufficiently long enough to allow the preset position to be reached. Increase the Dwell Time.

Symptom: The Sequences (Program, Tour, Group) will not run at all or will not run properly, with respect to the Dwell Time set, on a specific monitor.

1. Check in the External Timing Select Table if the monitor has EXT TIMING ON selected. If so, the dwell time of the monitor is synchronized with time lapse mode set in the associated Time Lapse VCR.

Symptom: The Preset Test stops after one minute with the WV-CS500 Combination Camera

1. Make sure that the Control Site Mode Selection Switch (SW2) is set to the Multi-Site Mode On position.

Symptom: While running the Preset Test, the WV-CS500 Combination Camera stops at preset positions for extended periods of time.

1. If the WV-CS500 had it's preset positions originally programmed by the PFW-300 System (Proteus for Windows), there are dwell times associated with those positions that will determine how long the Preset Test will take. Re-program the presets by using the Matrix Switcher to eliminate the dwell times.

Symptom: The Timer Event mode will not activate.

1. The Timer Event is defined in this system as Operator 00. Initially, the priority of operator 00 is set to 30 at the factory (the lowest priority). If another operator with a higher priority is currently operating the desired devices, the Timer Event will not occur (however, a backslash symbol “\” with either a Tour or Group Sequence number will appear in the upper-right corner of the monitor screen, for example: \T02). Increase the priority of operator 00 through use of the Operator Registration Table to enable the Timer Event.
2. If a Special Day Schedule is programmed, make sure that the month, day, and year are all filled out.
3. The order of priority for days of the week and special days is: Special Day has a higher priority than a regular day. Also, a Special Day entered in the Special Day Schedule Table before another Special Day is entered has a higher priority.

Symptom: The printer will not stop printing even though the Escape (ESC) Key is pressed.

1. The characters that are already sent to the buffer in the printer will be printed out, regardless of the **ESC** Key being pressed. This is normal.

Symptom: PROHIBIT appears in the LCD display.

1. The function attempted is not allowed because of the operator's level or there is operator's lockout of camera video and/or Pan/Tilt Control. Press the **ESC** Key to clear display. Change the operator's level and/or video lockout setup.

Symptom: WARNING! PROHIBITED! appears on the monitor screen.

1. The System Controller is not allowed to access a particular monitor due to Keyboard/Monitor partitioning. Change Keyboard/Monitor partitioning in the Set Up Menu.

Symptom: When Log-in is attempted, “No Entry” appears on the LCD.

1. An incorrect password or operator number is used during log-in. Use the correct password and operator number.

Symptom: When Log-in is attempted, “Monitor Busy” appears on the LCD.

1. All monitors are currently being used by an operator or event with a higher priority than this operator. Either change the priority of the operator to an equal or higher priority or wait for the current operator or event to complete their use of the monitors.

Symptom: “Monitor (#) Busy” appears in the LCD and the Busy LED also lights.

1. Another operator with greater priority is using that monitor. Wait until higher priority operator releases the monitor.
2. Another operator with equal priority has taken control over that monitor. Re-take control from that operator.

Symptom: “Camera (#) Busy” appears in the LCD and the Busy LED also lights.

1. Another operator with greater priority is using that camera. Wait until higher priority operator releases the camera.
2. Another operator with equal priority has taken control over that camera. Re-take control from that operator.

Symptom: The Busy LED lights up.

All monitors are busy. Wait until event or operator releases control over all monitors.

Symptom: “NOT AVAILABLE” appears in the LCD.

1. A Priority Lock is in effect for that monitor. Select another monitor.

Symptom: The Alarm LED lights up.

1. An alarm has been received. To clear the alarm, first select the alarmed monitor, acknowledge the alarm with the **ACK RESET** Switch. Then, clear the alarm by again pressing the **ACK RESET** Switch or wait until the Auto Reset function clears the alarm after a predetermined amount of time has past.

Symptom: The Alarm does not work.

1. Check that the Alarm Mode is selected "Mode 1 - 3" or Timer on the Alarm Mode Select Menu in the Set Up Menu.
2. Check that the Alarm Input (Site or Board) is selected "On" on the Alarm Mode Select Menu in the Set Up Menu.

Symptom: The sequence does not finish even after the programmed time.

1. The sequence, that is activated by the programmed timer, will be continued until the other operation is made after the stop time.

Symptom: The Group Sequence does not run to synchronized on the monitors that is made the EXT Timing setting from the connected VCR.

1. The step switching on the Group Sequence depends on the EXT Timing on a lowest number of the monitors that are assigned to run the Group Sequence.

Symptom: Can't operate the cameras by the Camera Position Numbers.

1. Check that the CAM-P Mode is selected "On" in the CAM-P Menu on the LCD.
2. Check that the Camera Position Numbers are registered correctly by using the Camera Position Test Mode in the CAM-P Menu on the LCD.

SPECIFICATIONS

SPECIFICATIONS

■ WJ-SX550A Matrix Switcher

General

Power Supply:	120V AC 60 Hz
Power Consumption:	Approx. 20W (Max. 75W with all optional boards installed)
Max. Number of Video Input Board:	8 (total 64 Input)
Max. Number of Video Output Board:	4 (total 16 Output)
Max. Number of Alarm Board:	1 (total 64 alarm Input)
Max. Number of System Controller:	8 (WV-CU550A)
RS-232C:	25 pin D-Sub Connector
Printer:	25 pin D-Sub Connector
Time Adjust In (for VCR):	2 pin Pair-Cable
VD/VS In/Out:	2 (BNC)
VD Out:	Video Level 4 V[p-p]/75Ω (BNC)

Camera Switching

Dwell Time:	Min. 1 second/max. 30 seconds
Max. Number of Sequences:	Program sequence 16 (1 program/monitor) Tour sequence 32 (any monitors) Group sequence 8 (any monitors)
Number of Programming Steps:	64

Time Event Program

Time Events (Start & Stop):	45/day
Formats of Time Event Program:	Day of week + 5 special days

Alarm Program

Max. Number of alarm Inputs:	64
Max. Number of Alarm Recalls:	99
Alarm Activations:	Mode-1: Any alarms to 1 monitor Mode-2: Any alarms to 4 monitors Mode-3: Any alarms to any monitors (max. 110 patterns)
Time Alarms (Start & Step):	10/day
Formats of Time Alarm Program:	Day of week + 5 special days

Operator Set Up

Max. Operator Registrations:	30 operators with 5 digits, password and priority
Access Operator Levels:	5 levels
Ambient Operating Temperature:	-10°C - +50°C (14°F - 122°F)
Ambient Operating Humidity:	Less than 90%
Dimensions:	480 (W) x 265 (H) x 371 (D) mm 18-7/8" (W) x 10-7/16" (H) x 14-5/8" (D)
Weight:	13.5 kg (29.7 lbs.)
Option:	Blank Panel WV-Q63

■ WV-PB5508 Video Input Board

Camera Input (1 - 8):	1.0 V[p-p]/75Ω composite video signal
Video Output (1 - 2):	0.5 V[p-p]/75Ω data signal and 2.5 V[p-p]/75Ω vertical timing pulse multiplexed
Function:	1.0 V[p-p]/75Ω composite video signal 9 pin D-Sub Connector Camera Site Control: All Input Cable Compensation: S, M, L (Short, Middle, Long) Vertical Drive (VD2) Output: On/Off Control Data Output: On/Off
Dimensions:	24.5(W) x 265(H) x 260(D) mm 15/16"(W) x 10-7/16"(H) x 10-1/4"(D)
Weight:	450g (1.0 lbs.)
Option:	Loop-Through Cable WV-CA64

■ WV-PB5504A Video Output Board

Monitor Output (1 ~ 4):	1.0Vp-p/75Ω composite video signal
Monitor Input (1 ~ 4):	1.0Vp-p/75Ω composite video signal
Alarm Output (1 ~ 4):	Open collector output: 16VDC 100mA max.
Reset Output (1 ~ 4):	Pulse (VTR): +5VDC 500msec. or Open collector output: 16VDC 100mA max.
External Timing Input (1 ~ 4):	Pulse 5V[p-p] interval time more than one second
Recover Input (1 ~ 4):	Make Contact or Open collector Input
	Contact time more than 0.5 second
	Interval time more than two seconds
Character Generator:	Camera ID: 30 characters (15 x 2 lines) Character Style: White with Black Border Black with White Border
Dimensions:	24.5 (W) x 265 (H) x 260 (D) mm 15/16" (W) x 10-7/16" (H) x 10-1/4" (D)
Weight:	400g (0.9 lbs.)

■ WV-PB5564 Alarm Board

Alarm Input (1 ~ 64):	Normally open or normally closed selectable (contact time more than 100 msec.)
	37 pin D-Sub connector (x2)
Dimensions:	24.5(W) x 265(H) x 260(D) mm 15/16"(W) x 10-7/16"(H) x 10-1/4"(D)
Weight:	400g (0.9 lbs.)

■ WV-CU550A System Controller

Power Supply :	120V AC 60 Hz
Power Consumption :	Approx. 4W
Data Input/Output :	6-conductor Modular Jack (RS-485, 4 Lines)
Switching Functions :	Program Sequence/Tour Sequence Group Sequence/Backward Sequence Forward Sequence/Inc Dec
Camera Functions :	Electronic Shutter : On/Off, Shutter Speed Select Electronic Sensitivity Up Mode Select : Auto/Manual/Off Electronic Zoom : On/Off, Zoom Position : Area Select Backlight Compensation : Auto/Preset/Off
Lens Functions :	Iris: Open/Close/Preset (only with DC control lens) Focus : Near/Far Zoom : Tele/Wide Auto Focus: Activate
Housing :	Wiper : On/Off, Defroster : On/Off, Camera : On/Off
Pan/Tilt :	Manual Pan : Right/Left, Manual Tilt : Up/Down Auto Pan : On/off, Random Pan : On/Off, Preset, Home
Auxiliary Switch :	AUX 1-2 : On/Off
Unit Number :	1 - 8
Ambient Operating Temperature :	-10°C - +50°C (14°F - 122°F)
Ambient Operating Humidity :	Less than 90%
Dimensions :	330 (W) x 74 (H) x 221 (D) mm 13" (W) x 2-15/16" (H) x 8-11/16" (D)
Weight :	2.2 kg (4.8 lbs.)
Option:	Rack Angle Bracket WV-Q62

■ WV-PB5548 Data Board

Data Input/Output(1 - 8):	RS-485.(Full.Duplex or Half Duplex, selectable inside the switch) [5-pin T(A), T(B), R(A), R(B), GND] X8 use with shield, twisted pairs data cable Transmitting Speed (Baud Rate); 1200 - 19200 bps
Max. Cable Length:	1,200 m (4,000 ft)
Max. Number Boards:	8 (Address 1 - 8, Total 1 - 64 Data Input/Output)
Dimensions:	24.5 (W) x 265 (H) x 260 (D) mm
	15/16" (W) x 10-7/16" (H) x 10-1/4" (D)
Weight:	400g (0.9 lbs.)

■ WV-Q62 Rack Angle Bracket

Dimensions:	90 (W) x 177 (H) x 30 (D) mm 3-9/16" (W) x 6-15/16" (H) x 1-3/16" (D)
Weight:	720g (1.6 lbs.)

■ WV-Q63 Blank Panel

Dimensions:	25.4 (W) x 263 (H) x 6 (D) mm 1" (W) x 10-3/8" (H) x 1/4" (D)
Weight:	50g (0.1 lbs.)

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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